The cognitive model of personality disorders : testing basic assumptions and treatment implications

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Cover design
Josien Molenaar

Druk
Datawyse / Universitaire Pers Maastricht

ISBN 90-9020460-1

Financial support for the printing of this thesis has been kindly provided by Psychotherapeutisch Centrum de Viersprong and RIAGG Maastricht.

The Cognitive Model of Personality Disorders

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PROEFSCHRIFT

ter verkrijging van de graad van doctor
aan de Universiteit Maastricht,
op gezag van de Rector Magnificus,
Prof. mr. G.P.M.F. Mols,
volgens het besluit van het College van Decanen,
in het openbaar te verdedigen op
donderdag 20 april 2006 om 16.00 uur

door

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Chapter 1

General Introduction

Introduction

Once, cognitive behavioral therapists were skeptical about the concept of personality disorders (PDs). This skepticism diminished with the introduction of the DSM-III (APA, 1980) in which PDs were described a-theoretically and separated from the Axis I disorders. From then on, they made a start on research into cognitive-behavioral models and treatments of personality disorders. Nowadays cognitive behavioral therapy (CBT) is one of the most influencing theories and psychotherapeutic frameworks in the field of PDs. However, the lack of research testing basic assumptions and treatment implications of CBT for PDs contrasts sharply with the constantly growing popularity of CBT and new clinical developments. Several studies have been conducted to fill this lack of empirical knowledge. This thesis aims to contribute to this work. More specifically, this thesis aims to contribute to the development of an evidence-based model of personality disorders.

Personality disorders, the concept

Personality pathology has been discussed in the clinical literature since the beginning of the recorded history of psychotherapy. Since the introduction of a separate axis to diagnose PDs in the third edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-III; APA, 1980), research in this area has grown markedly and definitions and theories for understanding PDs have been further developed and refined. In contrast to the DSM-II (APA, 1968), in the DSM-III specific diagnostic criteria for PDs were included on a separate axis (Axis II) to distinguish the merely temporary and egodystonic symptom disorders from the more enduring and egosyntonic disorders of personality functioning.
The present version of the DSM-IV-TR (APA, 2000) defines personality disorders as "an enduring pattern of inner experience and behavior that deviates markedly from the expectations of the individual's culture, is pervasive and inflexible, has an onset in adolescence or early adulthood, is stable over time, and leads to distress or impairment". The DSM-IV-TR general diagnostic criteria for a personality disorder are provided in Table 1. The DSM-IV defines PDs in term of traits. Personality traits are enduring patterns of perceiving, relating to, and thinking about the environment and oneself that are exhibited in a wide range of social and personal contexts. Only when personality traits are inflexible and maladaptive and cause significant functional impairment or subjective distress do they constitute PDs (APA, 2000). The emphasis on traits in the DSM, establishes the possibility of a conceptual continuity between normal and disordered personality (Livesley, 2001). Furthermore, the polythetic format to diagnose PDs implies that PDs are

combinations or constellations of traits and leads to considerable heterogeneity within one specific PD category.

Table 1.
General diagnostic criteria for a Personality Disorder (APA, 2000)

A.	An enduring pattern of inner experience and behavior that deviates markedly from the expectiations of the individual's culture. This pattern is manifested in two (or more) of the following areas: 1. cognition (i.e. ways of perceiving and interpreting self, other people, and events) 2. affectivity (i.e., the range, intensity, lability, and appropriateness of emotional response) 3. interpersonal functioning 4. impulse control
B.	The enduring pattern is inflexible and pervasive across a broad range of personal and social situations.
C.	The enduring pattern leads to clinically significant distress or impairment in social, occupational, or other important areas of functioning.
D.	The pattern is stable and of long duration, and its onset can be traced back at least to adolescence or early adulthood.
E.	The enduring pattern is not better accounted for as a manifestation or consequence of another mental disorder.
F	The enduring pattern is not due to the direct physiological effects of substance (e.g., a drug of abuse, a medication) or a general medical condition (e.g., head trauma).

DSM-IV-TR classifies 10 personality disorders in three clusters. In cluster A, the so-called odd and eccentric cluster, the Paranoid, Schizoid and Schizotypal PD are included. Cluster B includes the Antisocial, Borderline, Histrionic, and Narcissistic PD. Cluster C, the anxious or fearful cluster, includes the Avoidant, Dependent and Obsessive-Compulsive PD. The PD Not Otherwise specified and two additional diagnoses are placed within an appendix to DSM-IV for criteria sets provided for further study (passive-aggressive and depressive PD). For a general description of the specific PDs, see Table 2.

Table 2.

The PD clusters and specific PDs (APA, 2000)

Cluster A (*odd or eccentric*)
Paranoid PD is a pattern of distrust and suspiciousness such that other's motives are interpreted as malevolent.
Schizoid PD is a pattern of detachment from social relationships, cognitive or perceptual distortions, and eccentricities of behavior.
Schizotypal PD is a pattern of acute discomfort in close relationships, cognitive or perceptual distortions, and eccentricities of behavior.
Cluster B (*dramatic, emotional, or erratic*)
Antisocial PD is a pattern of disregard for, and violation of, the rights of others.
Borderline PD is a pattern of instability in interpersonal relationships, self-image, and affects, and marked impulsivity.
Histrionic PD is a pattern of excessive emotionality and attention seeking.
Narcissistic PD is a pattern of grandiosity, need for admiration, and lack of empathy.
Cluster C (*anxious or fearful*)
Avoidant PD is a pattern of social inhibition, feelings of inadequacy, and hypersensitivity to negative evaluation.
Dependent PD is a pattern of submissive and clinging behavior related to excessive need to be taken care of.
Obsessive-Compulsive PD is a pattern of preoccupation with orderliness, perfectionism, and control.
PD Not Otherwise Specified is a category for two situations:
i. the individual's personality pattern meets the general criteria for a PD and traits of several different PDs are present, but the criteria for any specific PD are not met;
ii. the individual's personality pattern meets the general criteria for a PD, but the individual is considered to have a PD that is not included in the Classification (e.g., passive-aggressive and depressive PD).

Studies using DSM definitions have demonstrated that PDs are widespread (APA, 2000). Community studies show a wide variation of prevalences of any PD as well as of the specific PDs. The prevalence of any PD in the general population varies between 5.9% and 22.5%, with a median prevalence of 11.1% and a pooled prevalence of 12.5% (Torgersen, Kringlen, & Cramer, 2001). The prevalence of each specific personality disorder tends to vary between 1% and 3% (Mattia & Zimmerman, 2001). In their review of epidemiology, Mattia and Zimmerman (2001) found that the Cluster C personality disorders were the most common of the three clusters of which the obsessive-compulsive personality disorder occurs the most. Obsessive compulsive personality disorder may differ from the other personality disorders in that many of the characteristics of OCPD have considerable value when they are less extreme (e.g., perfectionism and devotion to work and productivity).

Estimates of the prevalence of any PD in outpatients is 20-40 % (Arntz, 1999) and in inpatients above 50% (Arntz, 1999; Widiger & Mullins, 2003).
There appears to be significant comorbidity among the personality disorders themselves, and a substantial number of individuals with a personality disorder diagnosis also seem to have a comorbid Axis I disorder (Mattia & Zimmerman, 2001). A review of studies examining the co-occurrence of Axis I and Axis II disorders shows that nearly three-quarters of patients diagnosed with a PD also present with a syndrome disorder. The strongest relationships appear to be between the substance use disorders and the Cluster B disorders and between the somatoform and Cluster C PDs. Beyond these conclusions, however, there is little evidence for specific relationships between disorders (Dolan-Sewell, Krueger, & Shea, 2001).

Assessing DSM-IV personality disorders

Both structured interviews and self-report questionnaires have been developed in order to assess personality disorders according to the DSM. There are five well-known semistructured interviews to assess DMS-IV-TR personality disorders: (1) The Diagnostic Interview for DSM-IV Personality Disorders (DIPD-IV; Zanarini, Frankenburg, Chauney, & Gunderson, 1987); (2) The International Personality Disorder Examination (IPDE; Loranger, 1999); (3) The Personality Disorder Interview-IV (Widiger, Mangine, Corbitt, Ellis, & Thomas, 1995); (4) The Structured Clinical Interview for DSM-IV-TR Axis II Personality Disorders (SCID-II; First, Spitzer, Gibbon, Williams, & Benjamin, 1997); and (5) the Structured Interview for DSM-IV-TR Personality Disorders (SIDP-IV; Pfohl, Blum, & Zimmerman, 1997). For an extensive discussion concerning particular advantages and disadvantages of each particular interview, we refer to Clark and Harison (2001), Widiger and Coker (2002) and Zimmerman (1994). Self-report questionnaires used to measure DSM personality disorders are the Coolidge Axis II Inventory (CATI; Coolidge & Merwin, 1992), the Millon Clinical Multiaxial Inventory-III (MCMI-III; Millon, 1994), the Minnesota Multiphasic Personality Disorder Scales (MMPI-PD; Butcher, Dahlstrom, Graham, Tellegen, & Kaemmer, 1989), the Personality Assessment Inventory (PAI; Morey, 1991), the Personality Diagnostic Questionnaire-4+ (PDQ-4+; Hyler, 1994), the Schedule of Nonadaptive and Adaptive Personality (SNAP; Clark, 1993), the Wisconsin Personality Disorders Inventory-IV (WISPI-IV; Klein & Benjamin, 1993) and the Assessment of DSM-IV Personality disorders (ADP-IV; Schotte & De Doncker, 1994). For a description of the several instruments and a thorough review of issues and research methods in diagnosing PDs the reader is referred to Zimmerman (1994), Van Velzen (1996) and Clark (2001). Within the framework of this thesis some issues concerning assessment have to be

mentioned to bring into perspective the choice of instruments and the design of the reliability study (chapter 2). First, arguments pro and contra the use of an interview compared to a self-report questionnaire have to be considered. One of the advantages of self-report questionnaires is that they are free from systematic biases and tendencies of interviewers (Zimmerman, 1994). Furthermore, their cost-effectiveness is an advantage. The administration of an entire personality disorder semistructured interview takes between 1 to 3 hours, an amount of time that is impractical for routine clinical practice and often not feasible in research. Consequently, in clinical practice, it is recommended to screen patients on personality pathology by a self-report questionnaire. If there are indications that the patient suffers from one or more PDs, a structured interview with the patient may be needed. In research, both the use of questionnaires and interviews are common, dependent on the design and practical reasons like available assessment time. An often reported disadvantage of using self-report questionnaires is the problem of overdiagnosing. In both patient and nonpatient samples, the questionnaires tend to overdiagnose (Zimmerman, 1994). By contrast, semistructured interviews give the opportunity to clarify questions and eliciting examples of pathology so that positive responses can be followed-up to verify that the pathology was not situation or state specific but instead characteristic of long-term functioning. Furthermore, the advantage of an interview is the possibility to observe the respondent's behavior and presentation during the interview as an additional source of information.

Both for the diagnostic interviews and for the self-report instruments, currently few psychometric data are available for the DSM-IV-TR versions of the above mentioned instruments. Reviews studying reliability and validity of these instruments are mostly based on DMS-III or DSM-III-R versions of these instruments.

In a review of 15 joint-interview studies (Clark & Harrison, 2001), the average interrater reliability based on the ranges and overall reliabilities for individual personality diagnoses of the five interviews was found to be remarkably consistent -.70 to -.71 with the single exception of the DIP (one study, range .52 to 1.0). Interrater reliability for "any personality disorder" is above the standard cutoff of .70 for good agreement in all but one case (Clark and Harrison, 2001). In contrast to diagnostically based interviews, which focus on interrater reliability, reliability studies of diagnostically self-report instruments typically report internal consistency reliabilities (usually Cronbach's coefficient alpha) and, somewhat less frequently, temporal stability. Median alphas range from .52 (PDQ-R) to .90 (WISPI) (Clark & Harrison, 2001).

Although the above mentioned semistructured interviews and self-report questionnaires have high reliability, there are problems with the validity of these measures. Both Clark and Harrison (2001) and Perry (1992) conclude in their reviews that current methods for

making personality disorder diagnoses for the most part, yield diagnoses that are not significantly comparable across methods beyond chance. Sources for the disagreement include variance due to different raters, interview occasions, data sources (self-report versus observer report), information bases obtained, and instruments sensitivity to state effects (e.g., mood). To date, no instrument appears to be superior or should be regarded as the gold standard (McDermut & Zimmerman, 2005; Van Velzen & Emmelkamp, 1996; Zimmerman, 1994).

Because the SCID-II (First et al., 1997) is one of the most widely used and studied semi-structured interviews to assess personality disorders, the selection of participants of the major studies presented in this thesis is based on SCID-II diagnoses. To the best of the author's knowledge only Maffei and colleagues (Maffei et al., 1997) have investigated the interrater reliability and internal consistency of the DSM-IV version of the SCID-II. Internal consistency coefficients were satisfactory (.71- .94) (Maffei et al., 1997) and suggest that the SCID-II has adequate interrater and internal consistency reliability. However, reliability is a complex concept and is variable across studies, particularly for semistructured interviews, because reliability is a function of not only content of the interview questions but also the research design (e.g., joint vs separate interviews) and interviewer quality (Clark and Harrison, 2001). Specifically, interrater reliabilities are higher for joint compared to separate interviews (Zimmerman, 1994), and chances are high that interrater reliability of highly skilled versus newly trained interviews differ considerably. Thus, for interview-based measures it is important to establish reliability estimates for each new set of interviewers. Taking into account the reliability factors mentioned before, the aim of the first study of this thesis (chapter 2) was to assess the interrater reliability of the Dutch version of the SCID-II (First et al., 1997; Weertman, Arntz, & Kerkhofs, 2000) in the present sample of interviewers. We used a test-retest design, a more strict approach compared to the joint-interview design. In the test-retest approach, two raters separately interview the patient. Therefore three sources of error (i.e., rater variance in criteria interpretation, rater variance in the elicitation of information and patient variance across interviews) are being tested. Consequently, the test-retest approach approximates actual practice to a greater extent than the joint-interview approach. For a more profound discussion of the advantages and disadvantages of the joint-interview and test-retest approach, the reader is referred to the interrater reliability study of Dreessen and Arntz (1998).

The cognitive model of personality disorders

PDs in the DSM classification system are defined a-theoretically. Next to a-theoretical classification systems like the DSM, different theoretical orientations are described in the literature for PDs. Major viewpoints include the psychoanalytic, interpersonal, neurobiological, behavioral, and cognitive. During the last decades, the cognitive theory of PDs has developed into one of the main theoretical orientations in the PD literature and is currently receiving much attention. The cognitive model of personality disorders assumes that each personality disorder is characterized by typical maladaptive schemas about the self, others, and the world (Beck et al., 2004; Beck et al., 1990; Beck, 1998). These schemas are hypothetical psychological structures that select and synthesize incoming data. These schemas are assumed to remain unconscious because of the same normal, nonpathological mechanisms by which other habits of thinking and behaving become automatic (McGinn & Young, 1996). However, the expression of these underlying structures in more overt cognitive and affective patterns and behavior (strategies) can be identified, at least for a part. The cognitive patterns, which represent the content of a schema, are called "beliefs". These beliefs are fundamental assumptions, which refer to deeper cognitive structures than automatic thoughts and represent individual's understanding of themselves, their world and others. The healthy personality has stable, adaptive, realistic basic or core beliefs, for example: I am a reasonable competent person; my world has some danger but is predominantly a safe enough place for me; other people may be beneficent, neutral, or malevolent toward me (Beck, 1996). On the other hand, the beliefs of people with personality disorders are maladaptive and affect emotional and behavioral reactions negatively. Beck and colleagues have described a unique cognitive profile characteristic of each of the DSM-IV personality disorders (see Heim & Westen, 2005; Beck et al., 2001). Arntz, Dreessen, Schouten, and Weertman (2004) tested the psychometric qualities of a questionnaire based on beliefs formulated by Beck et al. (1990) and partly hypothesized by the constructors based upon theoretical considerations and their clinical experience with patients with PDS. They tested the short version of this questionnaire, the Personality Disorder Belief Questionnaire (PDBQ) in a sample of 643 subjects, including participants of studies presented in this thesis. This short version includes the subscales of the six most common PDs in a community mental health centre population (Dreessen & Arntz, 1998), namely the avoidant, dependent, obsessive-compulsive, borderline, paranoid and histrionic PD. By means of factor analytic techniques, the hypothesis was tested that factors could be derived from the PDBQ that correspond to the hypothesized subscales. Next, psychometric properties were improved

by item selection. Based on the results of this study, a summary of the core beliefs for each of these six common PDs are presented in Table 3.

Table 3.

Summary of core beliefs of the avoidant, dependent, obsessive-compulsive, borderline, paranoid and histrionic PD based on Arntz et al. (2004)

Avoidant
► I am a failure, boring and uninteresting.
► Other people are not really interested in me, look down on me and do things better than me.
► I have to avoid situations in which I receive attention, I have to behave as inconspicuous as possible.
Dependent
► I am weak and needy.
► Other people are strong and have to support me.
► I need someone who is always available to help me
Obsessive Compulsive
► I am completely responsible for myself and others.
► I am not allowed to make mistakes.
► I need ordiness, systems and rules, certainty and predictability.
Borderline
► I am a bad person and deserve to be punished.
► If people will really know me they will think I am reprehensible and will not be able to love me.
Paranoid
► I cannot really trust people among my acquaintances.
► Others are malevolent, treat me bad and are out to misuse me.
► I have to be on guard and to keep distance of other people.
Histrionic
► I am special and admirable.
► I have to get what I want.
► Others are easy to tempt and have to behave themselves as I want.
► Only if I behave myself conspicuously, other people will pay attention to me and admire me.

Schemas develop as a part of normal cognitive development as a result of interaction to help us understand and organize the world (Padesky, 1994). This normal development is a result of the interaction of innate dispositions and environmental influences. The typical maladaptive schemas of people with PDs develop as a result of genetic vulnerability and the exposure to undesirable influences from significant people and specific traumatic events. For example, a patient, predisposed by nature to overreact to the more

commonplace kinds of rejection in childhood, may develop a negative self-image ("I am unlovable"). This image may be reinforced if the rejection is particularly powerful, occurs at a particularly vulnerable time, or is repeated (Beck et al., 2004).

In spite of the increasing interest in and application of the cognitive model and treatment of personality disorders, little research has been performed into the basic assumptions of the cognitive model of PDs. Until now, cognitive models of personality disorders have mainly been tested using explicit measures like self-report questionnaires (e.g., Arntz et al., 2004; Arntz et al., 2004; Beck et al., 2001; Jacquin & Telch, 1998; Lee, Taylor, & Dunn, 1999). Although the above-mentioned studies are promising first steps into the validation of cognitive theories, at least two aspects might interfere with a proper interpretation of these data. First, if some parts of the underlying schemas are not accessible for introspection, it is logically impossible to assess these components by means of explicit measures. Second, it is not possible to rule out that results of these self-report studies are biased by demand characteristics and sources of self-presentational artefacts such as evaluation apprehension (see Nisbett & Wilson, 1977). Therefore, the major aim of the studies presented in chapter 3, 4 and 5 was to investigate whether the hypothesized schema contents can also be found by using information processing tasks, which are less vulnerable to interference of self-deception and demand characteristics. Some recent studies made a start with using more implicit measures of information processing in the context of personality disorders (e.g., Arntz, Appels, & Sieswerda, 2000; Arntz & Veen, 2001; Dreessen, Arntz, Hendriks, Keune, & Van den Hout, 1999; Renneberg, 2001; Veen & Arntz, 2000). The studies of chapter 3, 4 and 5 build on these sparse studies in information processing in PDs. Compared to borderline PD, there are very few studies focusing on information processing in Cluster C patients. Because of this lack of knowledge and because of the relative high prevalence rates of cluster-C PDs in our population (mainly outpatients), the main focus of our information processing studies was on Cluster-C PDs.

Treatment implications

Most patients suffering from a PD enter cognitive therapy for Axis I complaints like an anxiety or mood disorder. During a long time, both researchers and therapists have assumed that the presence of a concurrent PD makes it impossible, or very difficult, to treat patients for Axis I disorders (Arntz, 1999). However, there is growing evidence that CBT approaches seem to be equally effective for patients with and without a concomitant PD (see for reviews: Shea, Widiger, & Klein, 1992; Mulder, 2002; Dreessen & Arntz, 1998). Results of these studies show that, though patients with PDs tend to have more

complaints, especially higher scores on general psychopathology, in general they profit equally well from standard CBT treatments for their Axis I disorder (Arntz, 1999). Nevertheless, it is a persistent idea that PDs are a predictor of negative outcome in Axis I treatment. Next to the influence of the presence of PDs, various authors have speculated on how specific PD-related beliefs might complicate CBT treatment in Axis I disorders. Young, Klosko, and Weishaar (2003) assume that not only some specific Axis II schemas but many PD-related schemas have the potential to sabotage traditional CBT. To the best of our knowledge, there is only one published study that investigated the influence of PD related beliefs on treatment outcome in depression (Kuyken, Kurzer, DeRubeis, Beck, & Brown, 2001) and none in anxiety disorders. The study, presented in chapter 6, was designed to test in a large sample the hypothesis that the presence of any personality disorder, the presence of maladaptive beliefs in general and the presence of specific sets of personality-related beliefs predict less improvement in treatment of anxiety disorders.

CBT especially focusing on PDs is generally much more complex and potentially more lengthy than the treatment of patients with Axis I disorders alone. The aim of CBT for PDs is to modify core maladaptive beliefs and related strategies, in addition to recognizing and responding to automatic thoughts. Modifications of treatment (compared to Axis I treatments) include a greater focus on the therapeutic relationship, increased emphasis on developmental events, variations in session structure, and utilization of specialized strategies to alter dysfunctional beliefs and compensatory behavioral strategies (Beck, 1998). Several authors (Arntz & Weertman, 1999; Beck et al., 2004; Young et al., 2003) assume that an effective way to change Axis II schemas is the exploring, emotionally processing and reinterpreting memories of early childhood experiences. The rationale for this hypothesis can be derived from the more general concept of state-dependent learning. To "reality-test" the validity of childhood-originated schemas, the idea is that memories of experiences that contributed to their development should be activated and processed to change their meaning. Re-experiencing the episode facilitates the emergence of the dominant schemas and makes them more accessible for change (see Beck et al., 2004), page 89 and Arntz & Weertman, 1999).

Nevertheless, most CBT approaches for Axis II focus on the treatment of here-and-now problems, as is usually the case in CBT for Axis I disorders. So far, it is unclear how both approaches (focus on present versus focus on childhood memories) compare to each other in terms of effectiveness in changing personality disorder-related schemas and psychopathology. The last study of this thesis (chapter 7) addresses this issue.

Summary of research questions of this thesis

1. What is the test-retest reliability of the Dutch version of the Structured Clinical Interview for Axis II disorders (SCID-II)? (Chapter 2)
2. Are obsessive-compulsive PD patients characterized by a disorder-specific interpretation bias? (Chapter 3)
3. Are people with obsessive-compulsive PD traits characterized by automatic disorder-specific associations, and to what extent are the automatic associations related to direct self-reports? (Chapter 4)
4. Are dependent traits related to a disorder-specific interpretation bias and is this relation determined by dependent beliefs? In other words, are beliefs an essential part of information processing, mediating the relation between dependent traits and interpretation bias? (Chapter 5)
5. Does (a) the presence of any PD, (b) the presence of maladaptive PD related beliefs in general, (c) beliefs about the need to control feelings, (d) beliefs about the need to avoid failure, (e) beliefs about mistrust, and, (f) beliefs about hopelessness affect treatment for anxiety disorders negatively? (Chapter 6)
6. Is exploring, emotionally processing, and, reinterpreting memories of early childhood experiences an effective way to change PD related schemas and psychopathology in cognitive therapy for PDs? (Chapter 7)

Chapter 2

Short-interval test-retest interrater reliability of the Dutch Version of the Structured Clinical Interview for DSM-IV Personality disorders (SCID-II)

Weertman, A., Arntz, A., Dreessen, L., Van Velzen, C., & Vertommen, S. (2003). Journal of Personality Disorders, 17 (6), 562-567.

Abstract

This study examined the short-interval test-retest reliability of the Structured Clinical Interview (SCID-II; First, Spitzer, Gibbon, & Williams, 1997) for DSM-IV personality disorders (PDs). The SCID-II was administered to 69 in- and outpatients on two occasions separated by 1 to 6 weeks. The interviews were conducted at three sites by ten raters. Each rater acted as first and as second rater and equal number of times. The test-retest interrater reliability for the presence or absence of any PD was fair to good (Kappa = .63) and was higher than values found in previous short-interval test-retest studies with the SCID-II for DSM-III-R. Test-retest reliability coefficients for trait and sumscores were sufficient, except for dependent PD. Values for single criteria were variable, ranging from poor to good agreement. Further large-scale test-retest research is needed to test the interrater reliability of more categorical diagnoses and single traits.

Introduction

The Structured Clinical Interview for DSM Personality Disorders (SCID-II; First, Spitzer, Gibbon, & Williams, 1997) is a widely used semi-structured instrument to measure all DSM-IV PDs. Research on the interrater reliability of the SCID-II for DSM-III-R demonstrated that agreement varies from poor to excellent across different studies (e.g., Arntz et al., 1992; Dreessen & Arntz, 1998; First et al. 1995; Fogelson, Neuchterlein, Asarnow, & Subotnik, 1991; Renneberg, Chambless, Downdall, Fauerbach, & Gracely, 1992; Zimmerman, 1994).

Several factors may have influenced the size of the reliability coefficients found in these studies. First, some of the studies have small samples (half of the studies mentioned above had 32 or fewer patients). Second, diagnostic reliability is related to prototypicality, i.e. the more criteria met on the initial interview, the more likely the patient will again score above the threshold on retesting. Therefore, studies of reliability using severely character-disordered samples, or patients with significant personality pathology, may achieve higher reliability than studies of patients with less severe pathology (Zimmerman, 1994). Third, the methodology of the study (joint interview or test-retest) has great influence on the reliability coefficients. In joint interview studies only one source of unreliability is investigated (i.e., rater variance in criterion interpretation) whereas there are three sources of error (i.e., rater variance in criterion interpretation, rater variance in the elicitation of information and patient variance across interviews) in test-retest-

studies. Consequently the test-retest approach approximated actual practice to a greater extent than the joint-interview approach.
Fourth, studies, which were conducted by the personnel that developed the instrument, show higher interrater reliability (see Zimmerman, 1994).
After the publication of the DSM-IV (APA, 1994) the SCID-II has been revised to meet the DSM-IV criteria. To the best of the author's knowledge only Maffei and colleagues (Maffei et al, 1997) have investigated the interrater reliability and internal consistency of the DSM-IV version of the SCID-II. They administered the SCID-II to a sample of 231 in- and outpatients using a joint-interview design. Interrater reliability coefficients ranged from .48 to .98 for categorical diagnoses (Cohen's K), and from .90 to .98 for dimensional judgements (intraclass correlation coefficient). Internal consistency coefficients were satisfactory (.71 - .94; Maffei et al., 1997) and suggest that the SCID-II has adequate interrater and internal consistency reliability. The subsequent step should be an examination of the SCID-II's reliability using a test-retest approach. The present study was designed to investigate the test-retest interrater reliability of a Dutch version of the SCID-II in a mixed sample of in- and outpatients without initial screening by means of a personality questionnaire. The use of a screening questionnaire might inflate reliability artificially. We evaluated categorical as well as dimensional diagnoses.

Method

Participants

The participants were 69 patients (25 inpatients and 44 outpatients) entering treatment in three settings for anxiety disorders. No selection was made by suspicion of personality pathology. Of all patients, 48 were female. The mean age of the sample was 32.5 years (range 18-60). 46.4 per cent were married or lived together with a partner; and 52 per cent of the patients had more than one Axis I disorder. The main diagnosis for most of the patients was an anxiety disorder (n = 42). Other main diagnoses were eating disorders (n = 12), conduct disorders (n = 5), mood disorders (n = 3), other Axis I disorders (4) or no Axis I diagnosis (n = 3). Exclusion criteria of this study were: IQ < 75 and Axis I diagnosis of organic mental disorder, schizophrenia, delusional disorder or schizoaffective disorder.

Raters

Ten raters participated in this study. All raters were experienced in diagnosing and treating psychiatric patients and were either officially registered (cognitive-behavioral) psychotherapists or in training to become such therapists. Each rater acted as first rater

and as second rater an equal number of times. At each site, all possible combinations of raters were used the same number of times to control for effects resulting from rater combinations. Only one combination of raters was missing because of practical reasons.

Instrument

In this study a Dutch translation of the Structured Clinical Interview for DSM-IV Axis II Personality Disorders (SCID-II: First et al, 1997; Dutch translation and adaptation: Weertman, Arntz, & Kerkhofs, 2000) was used. This semi-structured interview is organized by diagnosis and covers the ten specific DSM-IV personality disorders and two appendix categories. The Dutch translation was realized in close consultation with the original authors and the application was pre-tested in different clinical settings.

Procedure

Following the standard procedure, the intake clinician administered an unstructured clinical interview followed by the Structured Clinical Interview for DSM-IV Axis I disorders (SCID-I: First, Spitzer, Gibbon, & Williams, 1996; Dutch translation and adaptation: Groenestijn, Akkerhuis, Kupka, Schneider, & Nolen, 1999). In one setting, the use of the SCID-I did not form a part of the standard procedure. After informed consent had been obtained, the first rater (who was mostly the intaker) held the first SCID-II interview. The second rater held the second interview between 1 and 6 weeks after the first interview. Both patient and second rater were blind to the results of the first interview.

Statistical Analyses

The "?" scores (= inadequate information) were rescored as 1 (= absent or false). Cohen's Kappa was used for estimating agreement on the presence or absence of personality disorders. For this purpose, ratings of 2 on single criteria were scored as absent. Cohen's squared weighted kappa was used for estimating agreement on single trait ratings (1= absent or false, 2= subthreshold, 3 = threshold or true) because of the ordinal nature of the three categories. Kappa was only calculated if at least 10% of the cases was diagnosed with that particular PD or with that particular trait by both raters. The Intraclass Correlation Coefficient (ICC) was used for estimating agreement on traitscores and sumscores (dimensional personality disorder variables). Traitscores were obtained by calculating the number of traits ("3" ratings) for specific PDs. Sumscores of specific PDs were calculated by adding up all the scores that were given on the traits concerned (1, 2 or 3). ICCs for trait- and sumscores were calculated only if at least five cases were diagnosed with two ore more traits of that particular PD by both raters.

Results

The presence of one or more full-blown PDs was 39,1% according to the first rater and 33,3 % according to the second rater. The most frequently diagnosed PD was Avoidant (n = 16 according to the first rater), further Obsessive-Compulsive (n = 8), Dependent (n = 5), Depressive (n = 5), Paranoid (n = 2), Borderline (n = 2) and Antisocial (n = 2). No patients were diagnosed with a Passive-Aggressive, Schizotypical, Schizoid, Histrionic, or Narcissistic PD according to the first rater.

There were no significant differences between the kappa values of the three treatment settings (χ^2 = 2.098, df = 2, $p > 0.10$). Therefore, only the overall test-retest results will be presented. Kappa for the presence of one or more PDs was .63 (observed agreement = 83%), which indicates fair to good agreement. Given the base rate problem, with regard to the presence of specific PDs, kappa was only calculated for the presence of avoidant personality disorder. Kappa for the presence of the avoidant personality disorder was found to be good (kappa = .79, observed agreement = 93%).

We could only calculate the ICC values for trait- and sumscores for avoidant, dependent, obsessive-compulsive, depressive, borderline, and antisocial A personality disorders. The ICC values of these disorders are presented in Table 1 and indicated fair to good or excellent agreement (range 0.41 - .88), except for the dependent trait- and sumscore, of which the ICC values were unsatisfactory (< .40).

Table 1.

Short-interval test-retest interrater reliabilities of the trait- and sumscores of the SCID-II-subscales for which ICC values could be calculated

Personality disorder	Traitscore ICC[a]	95% C.I.[b]	Sumscore ICC[a]	95% C.I.[b]
Avoidant	.82	.72-.88	.82	.72-.88
Dependent	.20	-.02-.41	.38	.16-.57
Obsessive-Compulsive	.63	.46-.76	.62	.45-.75
Depressive	.71	.57-.81	.76	.63-.84
Borderline	.70	.56-.80	71	.58-.81
Antisocial A	.88	.81-.93	.87	.80-.92

[a]ICCs were calculated only if at least five scale-values were selected of that particular personality disorder by both raters. [b]95% Confidence interval.

With regard to the single traits, weighted kappa values could be calculated for 33 traits of which 25 ICC values were larger than .40, indicating fair to good agreement between the first and the second rater[1].

Discussion

These results indicate that the DSM-IV version of the SCID-II possesses adequate test-retest interrater reliability for the presence or absence of any PD and for the presence or absence of avoidant personality disorder. The overall Kappa (.63) was higher than values found in previous short-interval test-retest studies with the DSM-III-R version of the SCID-II (overall Kappa varied from .16 to .53 [e.g., Dreessen & Arntz, 1998; First et al., 1995]). Test-retest reliability coefficients for trait- and sumscores were also sufficient, except for the dependent trait- and sumscores. Possibly the reformulation of the dependent personality disorder (from a mainly emotionally formulated dependency in the DSM-III-R (APA, 1987) to an almost totally functional dependency in the DSM-IV) could have caused problems in agreement in the case of patients who are emotional dependent but not functional dependent. Further research is needed to test this hypothesis.

We found no meaningful differences between the reliability of trait- and sumscores. This is somewhat surprising since sumscores are more dimensional than traitscores because they include subthreshold ratings on single traits. Comparable with the results of Dreessen and Arntz (1998) we found that the ICCs for single criteria were variable, ranging from poor to good agreement. This was not entirely accounted for by differences in frequency rates. The number of PDs for which we could calculate Kappa and ICC coefficients was restricted. However, as far as results were reported, they are still meaningful because of the use of a test-retest approach and the use of strict criteria for the calculation of Kappa and ICC coefficients. More large-scale test-retest research is needed to test the test-retest interrater reliability of the specific PD-categories and traits of the DSM-IV version of the SCID-II.

[1] A table with weighted kappa values for single traits is available form the first author

Chapter 3

Obsessive Compulsive Personality Disorder and Interpretation of Schema-Related Events

Weertman, A., Arntz, A., Salet, S. & Coenen, I. (submitted for publication).

Abstract

This study investigated the interpretation of ambiguous schema-related events in the context of Obsessive Compulsive Personality Disorder (OCPD). Ten short descriptions of mildly negative OCPD-related events were administered to patients with OCPD (n = 21), borderline patients (n = 17), avoidant and dependent patients (n = 17), Axis I patients (n = 26) and healthy controls (n = 41). After each description participants filled out open and forced-choice format questions. Responses on the forced-choice format showed that borderline and avoidant/dependent patients are characterized by disorder specific interpretation bias whereas OCPD-patients showed no disorder specific interpretation bias. Results of the open-response format indicated that OCPD-patients are not so much characterized by schema-related interpretations but more by a schema-related style (ruminative, inflexible and compulsive) of information processing.

Introduction

Cognitive theorists argue that the most problematic aspects of Obsessive Compulsive Personality Disorder (OCPD) result from intolerance of uncertainty and the strategies these patients use to avoid mistakes (see Beck et al., 2004; Freeman, Pretzer, Fleming, & Simon, 2004; Pollack, 1979). This results in a desire for total control over themselves and their environment. In line with these ideas Beck et al. (2004) formulated basic beliefs, which are hypothesized to characterize people with OCPD. According to Beck et al. (2004), people with OCPD see themselves as responsible for themselves and others and they see others as too casual, often irresponsible, self-indulgent, or incompetent. The core beliefs are e.g. "I could be overwhelmed," "I am basically disorganized or disoriented," "I need order, systems, and rules in order to survive" and their strategy revolves around a system of rules, standards, and "shoulds" (Beck et al., 2004). These beliefs about the self and others, core beliefs and strategies form the so-called OCPD-schemata, which stimulate selective processing of information, resulting in biased interpretations that maintain the pathological beliefs and strategies.

In a study of Gallagher, South, & Oltmanns (2003), evidence was found for selective processing of information in OCPD to avoid mistakes. They found that individuals with elevated levels of obsessive-compulsive personality traits exhibit an attentional coping style that is characterized by a dispositional tendency to seek out information regarding threatening events. In a recent study, Beck and his colleagues (2001) found support for the specificity of OCPD-related beliefs, using the Personality Belief Questionnaire (PBQ). Dreessen, Arntz, & Weertman (1996) developed the Personality Disorder Belief

Questionnaire (PDBQ) and tested the psychometric properties of the PDBQ in a sample of 643 subjects, including non-patient controls, Axis I and Axis II patients (Arntz, Dreessen, Schouten, & Weertman, 2004). Factor analyses and structural equation modelling supported the existence of a separate OCPD-scale and the reliability and validity of this subscale.

Although the above-mentioned studies are promising first steps into the validation of cognitive theories of OCPD, by and large, there are little studies available, validating the (cognitive) conceptualisation of OCPD.

The present study was designed to validate the cognitive conceptualisation of OCPD by investigating the interpretation of OCPD-relevant events in OCPD-patients. In this study, patients with avoidant personality disorder (APD) and dependent personality disorder (DEPD) were also included to control for disorder-specificity within Cluster C. Patients with borderline personality disorder (BPD) were included to control for disorder-specificity between Cluster C and Cluster B personality disorders. To exclude the possibility that OCPD-related interpretations are characteristic for psychopathology in general or people in general (including healthy persons), Axis I patients and normal controls were also included as control groups.

Former research into interpretation bias in personality disorders is scarce. Dreessen, Arntz, Hendriks, Keune, & Van den Hout (1999) tested schema-congruent interpretation bias in avoidant personality pathology by means of a pragmatic inference task. They found that DSM-III-R avoidant personality pathology was associated with avoidant beliefs, and avoidant beliefs were associated with schema-congruent information processing bias. Meyer, Pilkonis, & Beevers (2004) explored whether borderline and avoidant PD features would be directly linked with negative interpersonal appraisals, or whether this relationship would be indirect, perhaps via the mediating pathway of insecure attachment. Path analyses showed that BPD and APD features were associated with anxious attachment, which in turn were related to negative face appraisals (e.g., tendencies to rate faces as less friendly and more rejecting).

Compared to Axis II disorders, in the past decades interpretation bias in Axis I disorders has been more extensively investigated (Amir, Foa, & Coles, 1998; Constans, Penn, Ihen, & Hope, 1999; Cooper, 1997; McNally & Foa, 1987; Stopa & Clark, 2000; Voncken, Bogels, & De Vries, 2003). Most of these studies used a modified version of a questionnaire originally developed by Butler & Mathews (1983). They developed a questionnaire to measure interpretation bias in a sample of general anxiety disorder patients, depressed patients and normal controls. This questionnaire consisted of ten brief, ambiguous scenarios presented in booklet form. Subjects were first instructed to respond to an open ended question and thereafter were instructed to turn the page and arrange three

explanations in the order in which they would be most likely to come to mind in a similar situation (Butler & Mathews, 1983). Results of studies using versions of this questionnaire, in general support the hypothesis that Axis I disorders are characterized by disorder-specific interpretation bias.

In the present study we used a similar instrument to test interpretation bias in OCPD. We developed the Interpretation of OCPD-Threatening Events Questionnaire (IOTEQ), which consisted of ten (mildly) negative OCPD-related scenarios. The IOTEQ response section consisted of: (1) an open-ended part; (2) a forced-choice part in which an OCPD, BPD and other Cluster C interpretation were presented; (3) a part in which the participants were asked to rate the believability of the three possible interpretations as presented in the forced-choice part of the IOTEQ. In the forced-choice part, we did not formulate healthy interpretations to avoid demand characteristics. Our specific hypotheses were as follows: (1) OCPD patients would be more likely to choose the OCPD-specific interpretations in the forced-choice part and would rate these interpretations as more believable compared to BPD and other-Cluster C patients (2) normal controls and Axis I disorder patients would as likely choose the OCPD-specific interpretations compared to OCPD-patients but they would rate these beliefs as less believable compared to OCPD-patients; (3) other-Cluster C and BPD patients would more likely choose Cluster C and borderline interpretations and rate these interpretations as more believable; (4) the answers on the open-ended questions of the personality disorder groups, would be comparable to the experimenter produced beliefs of the specific disorders in the forced-choice format; (5) the answers on the open-ended questions of the Axis I patients and healthy controls would not correspond to the forced-choice interpretations but would be characterized by more healthy interpretations. In sum, we hypothesized that OCPD-patients as well as BPD and APD/DEPD patients are characterized by a disorder-specific interpretation bias. To our knowledge this is the first study into interpretation bias in a clinical sample of OCPD, APD, DEPD and BPD.

Method

Participants

Participants were recruited in Belgium and the Netherlands from six psychiatric hospitals (PMS Vijverdal in Maastricht, GGzE in Eindhoven, Vincent van Gogh Instituut in Venray; Parnassia PC in the Hague; UC Sint Josef in Kortenberg and OPZ in Rekem,) a community mental health centre (RIAGG in Maastricht) and a rest home (Dr. Poelsoord in Maastricht).

122 people participated in this study. Exclusion criteria for all participants included mental retardation, acute psychotic disorders, acute manic episode, alcohol and drugs

use before entering the assessment, unsatisfactory knowledge of Dutch and age >60 or < 18 years. All participants were screened by means of the Structured Clinical Interviews for DSM-IV Axis I and Axis II disorders (SCID-I: First, Spitzer, & Williams, 1997; Dutch translation: Groenestijn, Akkerhuis, Kupka, Schneider, & Nolen, 1999; SCID-II: First, Spitzer, Gibbon, Williams, & Benjamin, 1997; Dutch translation: Weertman, Arntz, & Kerkhofs, 2000).

Participants were admitted to the OCPD-group (n = 21) when they met the criteria for OCPD and not the criteria of a Cluster A or B personality disorder and not more than four criteria of BPD. Participants were admitted to the other-Cluster C group (n = 17) when they met the criteria of APD or DEPD and not the criteria of OCPD or a Cluster A or B personality disorder and not more than four criteria of BPD. The BPD-group (n = 17) consisted of participants meeting the criteria of BPD and the Axis I group consisted of people with an Axis I disorder (n = 26) but not meeting a full-blown or subthreshold PD-diagnosis and not meeting more than two BPD criteria. Normal controls (n = 41) were people not meeting an Axis I disorder and no more than one Axis I disorder in remission, no full-blown or subthreshold PD-diagnosis and not meeting more than two BPD criteria.

Table 1.

Participant characteristics (N = 122)

	OCPD (n=21)	APD/DEPD (n=17)	BPD (n=17)	Axis I (n=26)	Normals (n=41)
Age (M + SD)	36.5 ± 10.3	39.9 ± 10.9	26.5 ± 5.6	36.5 ± 11.6	36.6 ± 15.3
% Female (n)	38 (8)	59 (10)	94 (16)	58 (15)	56 (23)
Education					
% Lower general level (n)	9.5 (2)	23.5 (4)	35.3 (6)	23.1 (6)	7.3 (3)
% Middle level (n)	42.9 (9)	41.2 (7)	29.4 (5)	46.2 (12)	46.3 (19)
% Higher/university level (n)	47.6 (10)	35.3 (6)	35.3 (6)	30.8 (8)	46.3 (19)
Axis I disorders (M + SD)	1.1 (1.2)	1.7 (1.0)	1.7 (1.2)	1.6 (1.0)	0 (0)
Axis II disorders (M + SD)	1.1 (0.4)	1.3 (0.5)	3.0 (1.8)	0 (0)	0 (0)

Table 1 presents the demographic variables and the mean number of Axis I and Axis II diagnoses for each group. In all patient groups, anxiety disorders and mood disorders were the most frequent diagnosed Axis I disorders. The groups differed significantly on age, $\chi^2(4, N = 122) = 11.48$, $p = .02$, and gender, $\chi^2(4, N = 122) = 12.62$, $p < .01$. In the

BPD group, participants were younger compared to the other groups and all except one of the participants in the BPD group were women.

Materials

The Interpretation of OCPD-Threatening Events Questionnaire

The Interpretation of OCPD-Threatening Events Questionnaire (IOTEQ) consists of ten short self-referent scenarios describing mildly negative OCPD-related events. For example, "you have still a lot of work to do and a colleague asks you to take over a part of your work. The other day you find out that your colleague has rushed your work and made a lot of mistakes". The ten scenarios are supposed to trigger four main categories of OCPD-related beliefs, as formulated by several cognitive theorists (Bailey, 1998; Beck, 1990; Beck, 2004), namely 1. beliefs about being a failure when making mistakes; 2. beliefs about the need to control others; 3. beliefs concerning the need to control emotions; 4. beliefs about avoiding imperfection. The participants read the brief scenarios, followed by three questions (what would you feel, what would you think, what would you do?). Participants were asked to write the first answers that came to mind. They were then asked to turn the page after which three interpretations were presented: an OCPD interpretation (e.g. it's my own fault, I better do everything myself), a BPD interpretation (e.g. you cannot trust other people) and an other-Cluster C interpretation (I can better say nothing about it, otherwise I will have an argument with someone). The disorder-specific interpretations were based on the cognitive model of Beck et al. (2004) and were validated by a team of PD-expert therapists and researchers. The order of disorder specific interpretations was varied between the ten scenarios. Participants were asked to tick off which of these three interpretations was most likely to come to mind. Once participants had written their answers and completed the forced-choice part, they opened the last part of the questionnaire in which the ten scenario's and three interpretations were presented again. Participants were asked to rate the extent to which they would believe each of the three alternative thoughts on a 100 mm Visual Analogue Scale (VAS). It was not allowed to thumb back.

Scoring of the IOTEQ

Of all participants, all themes that were notable or returning in the open responses, were noted by two independent raters (who were blind for Axis I and Axis II diagnoses). Then, the raters classified these themes by mutual agreement into categories. Categories with fifty or more observations were included in the final scoring system. Finally 16 categories left over. A third rater rated the open responses according to these 16 categories of 20 participants (randomly selected) to test the test-retest reliability of the scoring system.

The Intraclass Correlation Coefficient (ICC) for 14 categories was satisfying (ranging from 0.64–0.91). The ICCs for the category "negative feelings" and the remaining category were insufficient, probably because of the broad character of these categories. The number of open responses in each of the 16 categories over the ten scenarios constituted the dependent variable (averaged over the two raters). For the forced-choice questions, a sumscore per category was calculated based on how frequently the category of interpretations was chosen (range 0–10) and a mean score was calculated for the belief ratings (0–100).

Procedure

Most of the participants filled in the questionnaires as a part of a more extensive project, including studies into information processing in PDs. We assumed that the order of acquisition would not influence the results of the IOTEQ. The acquisition order varied between patients due to variance in participation in different parts of the project.

Analyses

For the forced-choice responses and belief ratings, comparisons between groups and categories were based on split-plot analyses. Deviation contrasts were used to locate main and interaction effects. Because of the explorative character of the open-ended format of the IOTEQ, we analyzed these data by means of stepwise regression analyses.

Results

Forced-choice response

A split-plot analysis of variance with one within subject factor (category: OCPD, BPD, APD/DEPD), and one between-subject factor (group: OCPD, BPD, APD/DEPD, Axis I, nonpatients) revealed a main effect of category, $F(1, 117) = 109.2$, $p < .01$, $d = 0.95$ and a significant group x category interaction, $F(4, 117) = 7.84$, $p < .01$, $d = 0.25$. Deviation contrasts revealed that participants were the most likely to select OCPD interpretations ($p < .01$), whereas APD/DEPD interpretations and BPD interpretations were significantly less popular than the average (both $p < .01$). The group x category interaction was further examined by deviation contrasts on the group factor after partialling out the main category effect. The results are shown in Table 2.

In line with the idea that interpretation of ambiguous situations is disorder specific, we found that the BPD-group selected more often the borderline interpretations and the APD/DEPD group selected more often the APD/DEPD interpretations compared to the other participant groups. In contrast with our expectations, the OCPD-group did not

choose the OCPD-interpretations more often than the other participant groups. Both the Axis I and the nonpatient group were more likely to select the OCPD interpretations and less likely to select the borderline interpretations compared to the personality disorder groups.

Table 2.

Deviation Contrasts for the forced-choice responses after partialling out the main category effect

		Response Category		
Groups		OCPD	BPD	APD/DEPD
OCPD (n=21)	*M*	0	-0.1	0
	(SD)	(0.4)	(0.2)	(0.3)
	t	.11	.40	.19
	p	.92	.69	.85
BPD (n=17)	*M*	-1.3	1.4	0
	(SD)	(0.4)	(0.3)	(0.3)
	t	-3.57	5.75	-0.69
	p	< .01	< .01	.95
APD/DEPD(n=17)	*M*	-1.1	0.1	1.0
	(SD)	(0.4)	(0.3)	(0.3)
	t	-2.94	0.52	3.5
	p	< .01	.60	< .01
Axis I (n=26)	*M*	1.5	-0.7	-0.9
	(SD)	(0.3)	(0.2)	(0.3)
	t	4.76	-3.25	-3.51
	p	< .01	< .01	< .01
Normals (n=41)	*M*	0.9	-0.7	-0.1
	(SD)	(0.3)	(0.2)	(0.2)
	t	3.24	-4.29	-0.69
	p	< .01	< .01	.49

Strength of Beliefs

A split-plot analysis of variance with one within subject factor (category: OCPD, BPD, APD/DEPD), and one between-subject factor (group: OCPD, BPD, APD/DEPD, Axis I, nonpatients) revealed a main effect of category, $F(1, 117) = 89.48$, $p < .01$, $d = 0.86$, a main effect of group, $F(4,117) = 16.1$, $p < .01$, $d = 0.36$ and a significant group x category interaction, $F(4,117) = 8.69$, $p < .01$, $d = 0.27$. Deviation contrasts revealed that in general participants believed OCPD-interpretations more than the average ($p < .01$), Cluster C interpretations just as the average ($p = .98$) and BPD-interpretations less than

the average ($p < .01$). BPD and Cluster C patients had higher belief ratings than the average, independent of category (both $p < .01$). Both the Axis I and nonpatient group gave lower belief ratings than the average (both $p < .01$). The OCPD-patients gave average belief ratings ($p = 1.00$). The group x category interaction was further examined by deviation contrast on the group factor after partialling out the category and group main effects. The results are shown in Table 3. The results of the belief ratings are in line with the forced-choice responses. Belief ratings of the BPD-group on the BPD-interpretations were higher than the average and the APD/DEPD group scored higher than the average on the APD/DEPD interpretations. Belief ratings of the OCPD-group were on the average on all three categories. The predicted disorder-specific effect failed to occur. In contrast to our hypothesis, the Axis I and nonpatient group had higher belief ratings on the OCPD-interpretations than the average.

Table 3.

Deviation contrasts for the relative belief ratings after partialling out the category and group main effect

		Response Category		
Groups		OCPD	BPD	APD/DEPD
OCPD (n=21)	*M*	-0.5	-0.1	0.6
	(SD)	(2.4)	(1.9)	(1.7)
	t	-0.23	-.05	0.38
	p	.81	.96	.71
BPD (n=17)	*M*	-9.2	7.9	1.3
	(SD)	(2.6)	(2.1)	(1.9)
	t	-3.99	4.43	0.74
	p	< .01	< .01	.46
APD/DEPD(n=17)	*M*	-5.6	1.1	4.5
	(SD)	(2.6)	(2.1)	(1.9)
	t	-2.43	0.61	2.68
	p	.02	.54	< .01
Axis I (n=26)	*M*	8.8	-4.4	-4.4
	(SD)	(2.1)	(1.7)	(1.6)
	t	4.49	-2.86	-3.10
	p	< .01	< .01	<0.1
Normals (n=41)	*M*	6.5	-4.6	-1.8
	(SD)	(1.7)	(1.3)	(1.2)
	t	3.85	-3.52	-1.52
	p	< .01	< .01	.13

Open-ended Responses

We explored the influence of OCPD-traits, other-Cluster C traits and BPD traits on the open responses by means of stepwise regression analyses (we set probability of *F* entry at .05 and *F* remove at .10). We investigated the effects of traits instead of personality disorder groups to deal with comorbidity on Axis II. We controlled for the influence of general psychopathology (Axis I and the personality disorder groups were coded as general pathology, healthy controls as no general pathology), age and gender. The results are presented in Table 3. OCPD traits were positively related to "worry". OCPD was also positively related to "compulsiveness", including perfectionism, not allowing failures, controlling, responsibility and high standards. BPD traits were negatively related to solution tendency and "tackle the problem" and positively related to "blaming others/ experiencing others as malicious". Other-Cluster C traits were negatively related to "flexibility" and "acceptance" and positively related to "self-criticism", "sense of guilt", "fear of judgement" and "negative emotions". General pathology was negatively related to "flexibility", "healthy coping" and positively related to "avoidance".

Table 4.

Effects of OCPD-traits, APD/DEPD traits, BPD traits and general psychopathology on the open responses

Response Category	Predictors	β	*t*	*p*
Solution tendency	BPD traits	-.22	2.45	.016
Flexibility	General pathology	-.26	2.67	.009
	APD/DEPD traits	-.26	2.64	.009
"Healthy" coping	General pathology	-.28	-3.11	.002
Acceptance	APD/DEPD traits	-.25	-.286	.005
	Gender	.23	2.61	.01
Go about it	BPD traits	-.22	-.248	.014
Self-criticism	APD/DEPD traits	.50	6.32	< .001
Sense of guilt	APD/DEPD traits	.27	2.99	.003
Avoidance	General pathology	.30	3.41	.001
Worry	OCPD traits	.24	2.73	.007
Shame	-	-	-	-
Fear of judgement	APD/DEPD traits	.27	3.11	.002
	Age	-.23	-2.66	.009
Compulsiveness	Age	-.24	-2.77	.007
	OCPD traits	.18	2.09	.039
Negative emotions	APD/DEPD traits	.32	3.67	< .001
Dependency	Gender	-.18	-2.03	.045
Other-criticism/malicious	BPD traits	.28	3.18	.002

Discussion

As far as is known by us to date, this is the first study of interpretation bias in personality disorders in a clinical sample. We found evidence for the hypothesis that patients with borderline, avoidant and dependent personality disorder are characterized by a disorder-specific interpretation bias. The questionnaire we used, was originally developed for OCPD. The results for APD/DEPD and BPD support the assumption of the cognitive model (Beck et al., 2004; Young, Klosko, & Weishaar, 2003) that disorder-specific interpretations occur in a wide range of situations, including the typical OCPD-related events presented here.

We found no evidence for such a disorder-specific interpretation bias in OCPD patients. On the forced-choice format as well as the believability ratings, OCPD patients scored on the average on the OCPD-interpretations. Consistent with our hypothesis, Axis I patients and healthy controls were more likely to select the OCPD interpretations in preference to the BPD and APD/DEPD interpretations. However, in contrast to our hypothesis, Axis I patients and healthy controls selected the OCPD interpretations even more often than the OCPD-group and gave higher believability ratings compared to the OCPD-group. In other words, the OCPD-group seemed to be completely normal and the Axis I and healthy controls seemed to be characterized by a OCPD-disorder specific interpretation bias. Modest OCPD-traits are often seen as adaptive and particularly suitable for managing the complex demands of modern industrial society (APA, 1994; Pfohl & Blum, 1995). Possibly, the results of the forced-choice format can be explained by the idea that Axis I patients and healthy controls most often selected the relatively healthier OCPD-interpretation, in the absence of a real healthy control interpretation. However, this tendency to choose the healthiest interpretation could not explain the higher believability scores of the Axis I patients and healthy controls compared to those of the OCPD-group.

We can speculate about several explanations. It could be well that, although the participants had to rate the believability separately from their responses on the forced-choice items, they related their believability ratings to them.

They could have reasoned that they have to rate their selected interpretations considerably higher than the other interpretations. Moreover, we only asked patients to rate the believability of the interpretations. Some studies in Axis I disorders asked patients to rate subjective costs and probability rates of disorder-specific aversive events (Butler & Mathews, 1983; Cooper, 1997; Voncken et al., 2003). These studies revealed that patients not only have higher probability rates of disorder-specific aversive events but also have higher estimate rates of the subjective cost (how upsetting the event would be). Possibly OCPD-patients do not overestimate the believability of OCPD-related interpretations but overestimate the probability of OCPD-related aversive events and/or

overestimate the subjective costs of these events. Further research with probability and cost ratings can clarify this.

Responses on the open-ended questions revealed that OCPD-patients are characterized by a disorder-specific style of processing ambiguous information, namely, a ruminative and compulsive style of information processing. This ruminative style reflects worrying. The compulsive style refers to interpretations and behaviors reflecting perfectionism, not allowing failures, control, responsibility and high standards. Both the ruminative as well as the compulsive style of information processing are described in the literature as core aspects of OCPD (Freeman et al., 2004; Pollack, 1979). These findings provide empirical support for the notion that one of the main problems of OCPD result from the strategies these patients use to avoid mistakes (Freeman, 1990; Freeman et al., 2004; Pretzer & Hampl, 1994). The OCPD-interpretations formulated in the forced-choice format partly represent beliefs about the negative consequences of making mistakes and the need to avoid imperfection. Therefore it is even more striking that we did not find a disorder-specific effect of OCPD in the forced-choice format. The results of the open-format responses could indicate that the more overt expression of the assumed underlying OCPD-schemata is more accessible to consciousness compared to the assumed underlying beliefs. This is in line with observations of OCPD-patients in clinical practice. OCPD-patients often find it difficult to express the underlying reason behind their strategies.

The answers on the open-ended questions of the BPD and APD/DEPD group were partly in line with the experimenter-produced interpretations in the forced-choice part of the questionnaire and partly yielded new information. It was found that BPD traits were negatively related to "solution tendency" and "tackle the problem" and Cluster C traits were negatively related to "flexibility" and "acceptance". The answers to the open-ended questions were particularly informative as they represent participants' own thoughts in response to the ambiguous situations instead of experimenter-produced interpretations. Next to it, the open responses gave information about over- and/or underdeveloped strategies of information processing in the specific disorder groups.

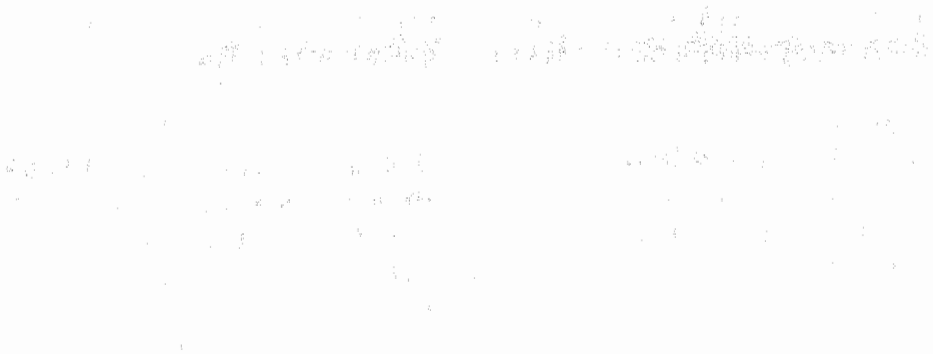
Clinical implications

The results of this study emphasize the importance to work on decreasing maladaptive interpretations and increasing the availability or salience of alternative interpretations in cognitive therapy for APD, DEPD and BPD. In OCPD the role of specific beliefs is unclear. Results of this study indicate that particularly in OCPD, it may also be important to work to change information processing strategies and coping styles. Next to it, the results also indicate that APD, DEPD and BPD use less often the more healthy strategies ("solution

tendency" and "tackle the problem" in BPD and "flexibility" and "acceptance" in APD/DEPD). This implicates that next to working on cognitions, teaching adequate problem solving strategies will be indicated in cognitive therapy for PDs.

Limitations

Several limitations of the present investigation should be mentioned. First, as mentioned above, in this study we only measured believability of OCPD interpretations. We did not investigate probability and cost ratings of OCPD-related aversive events. Second, we only included mildly negative events. We did not investigate interpretations in neutral or positive situations. Third, the use of a questionnaire to measure interpretation bias can be questioned. Ideally, interpretation bias should be measured in real life situations.



Chapter 4

Implicit Self- and Other-Associations in Obsessive-Compulsive Personality Disorder Traits

A. Weertman, A. Arntz, P. J. de Jong & M. Rinck (submitted for publication).

Abstract

This study investigated automatic associations with the self and with others in the context of Obsessive Compulsive Personality Disorder (OCPD). Participants scoring high (n = 20) or low (n = 20) on DSM-IV OCPD traits performed 3 variants of a Simon Task in which language of the words (Dutch vs. English) was the relevant stimulus feature and word content (OCPD self-view, OCPD other-view, high self-esteem and low self-esteem) the irrelevant feature. Results showed that the high and low OCPD group differed with respect to both explicit and implicit OCPD cognitions. Typically, high OCPD participants showed better performance on OCPD-congruent trials than on OCPD-incongruent trials, whereas low OCPD participants displayed the opposite pattern. This differential response pattern was only evident for OCPD-related attributes. In line with the idea that direct and indirect measures address different phenomena, correlations between direct and indirect measures of OCPD beliefs and self-esteem were low.

Introduction

Cognitive models of personality disorders assume that each personality disorder (PD) is characterized by typical maladaptive schemas about the self, others, and the world (see Beck et al., 1990; Beck et al., 2004; Beck, 1998). These schemas are not in themselves conscious, although it may be possible to identify at least a part of their content by introspection. So far, it is unclear to what extent this is possible, and therefore, whether schema content can be measured at this explicit level. Moreover, several authors (Arntz, Dreessen, Schouten, & Weertman, 2004; Young, 1990) have suggested that people scoring high on personality disorder traits may be characterized, at least in part, by schema contents that the individual cannot report upon.

Until now, cognitive models of personality disorders have mainly been tested using direct measures like self-report questionnaires (e.g., Arntz et al., 2004; Beck et al., 2001; Jacquin & Telch, 1998; Lee, Taylor, & Dunn, 1999). By and large, the findings of these studies support the idea that each personality disorder is characterized by a specific set of beliefs. However, at least two aspects might interfere with a proper interpretation of these data. First, if some parts of the underlying schemas are not accessible to introspection, it is impossible to assess these components by means of direct measures such as questionnaires. Second, it is impossible to rule out that results of self-report studies are biased by demand characteristics and self-presentational artefacts such as evaluation apprehension (see Nisbett & Wilson, 1977). Therefore, it would be important to see whether the hypothesized schema contents can also be found at an implicit level (in

the sense of non-intentional and uncontrollable), and without the potential interference of self-deception and demand characteristics.

Following this, some recent studies in the context of personality disorder traits included measures of automatic information processing in addition to the traditionally used self report questionnaires (e.g., Arntz, Appels, & Sieswerda, 2000; Arntz & Veen, 2001; Dreessen, Arntz, Hendriks, Keune, & Van den Hout, 1999; Renneberg, 2001; Veen & Arntz, 2000; Weertman & Arntz, submitted). The results of these studies are few, but promising. However, they provide only rather indirect information with respect to the hypothesized schemas, because they assessed cognitive processes that are hypothesized to depend on schemas (e.g., attention, inferences, interpretations), rather than assessing the schematic associations themselves. Therefore, the present study aims to further explore the characteristics of the hypothesized maladaptive schemas in personality disorder traits by means of performance-based, indirect measures that reflect individuals' cognitive representations of the self and others per se.

Results of recent research (De Houwer, 2003; De Jong, Van den Hout, Rietbroek, & Huijding, 2003) suggest that Simon tasks may be useful tools for measuring self- and other-associations at an implicit level. Therefore, in the present study we used a Simon task based on the so-called Semantic Simon Paradigm (SSP), originally developed by De Houwer (1998). The SSP is an irrelevant feature paradigm that is based on the original Simon Paradigm (Simon & Rudell, 1967), a spatial task, and it consists of four elements: (1) There is a relevant stimulus feature that determines what the correct response should be (e.g., words printed in lower case vs. upper case letters); (2) there is an irrelevant stimulus feature that has to be ignored (e.g., word content: "teacher" or "DOG"); (3) there is a relevant response feature (e.g., saying "Occupation" vs. "Animal" in response to words in lower case and uppercase, respectively), and (4) there is a dimensional overlap between the irrelevant stimulus feature and the relevant response feature (e.g., the responses "Occupation" vs. "Animal" coincide with the meaning of the words). Accordingly, the semantic category of the required response is congruent or incongruent with the task-irrelevant semantic category of the presented word. For instance, the response "occupation" on trials depicting "teacher" would be congruent, whereas the response "animal" on trials depicting "TEACHER" would be incongruent. Results of previous studies (De Houwer, 1998; De Jong et al., 2003) using the SSP demonstrated that although participants were responding to the task-relevant feature of the words, they also unintentionally retrieved task-irrelevant information about the semantics of the words. The interference or facilitation caused by the irrelevant stimulus feature is known as the Semantic Simon effect.

Since the present study is a first exploration of how the SSP may be applied to measuring self- and other-representations in participants scoring high versus low on PD traits, we limited the study to one of the more prevalent personality disorders (see Torgensen, Kringlen, & Cramer, 2001), namely, obsessive-compulsive personality disorder (OCPD). To identify individuals who scored particularly high or low on obsessive-compulsive traits, we employed the SCID-Personality Questionnaire (SCID-IIQ; First, Gibbon, Spitzer, Williams, & Benjamin, 1997).

According to the cognitive model of PDs (Beck et al., 1990) people scoring high on OCPD traits see themselves as responsible, conscientious, and hard-working. In contrast, others are seen as too casual, often irresponsible, self-indulgent, or incompetent. Thus, the cognitive model of OCPD implies that opposite attributes are associated with the self and with others. Therefore, measuring representations of the self and of others simultaneously (as a bipolar dimension) is likely to improve the sensitivity of measuring implicit OCPD-relevant representations. For this reason, participants in Task 1 of the current study had to respond to single words by saying "ik" (I) vs. "anderen" (others) as the relevant bipolar response feature. The words were either Dutch or English words, and participants had to give one or the other response (I vs. other) depending on the language of the words (Dutch vs. English). We chose language as the relevant stimulus feature because De Houwer (1998) found larger effects for this feature compared to letter case or grammatical category of the words. Thus, it appears that the more semantic processing is needed for the relevant feature, the stronger the interference effects of the irrelevant feature are. In this study, the irrelevant stimulus feature was word content (e.g., OCPD self-view, OCPD other-view), that is, some words were related to the typical self-view in OCPD (e.g., "responsible"), while others to the typical other-view (e.g., "incompetent").

In Task 2, we employed a slightly different irrelevant feature paradigm that promises to assess the relative contribution of self-associations and other-associations. This paradigm was successfully used by De Jong et al. (2003) to measure implicit self-esteem and other-esteem, and it may be used similarly for the study of OCPD-related associations. In our variant of this paradigm, each stimulus word was preceded by a prime consisting of the short phrase "I am" or "Others are", presented in a mixed, random order. The relevant target response was saying "yes" versus "no". As in Task 1, this response was given depending on the relevant stimulus feature "language" (Dutch vs. English), and the words were either OCPD-self relevant or OCPD-other relevant. Finally, Task 3 was a conceptual replication of Task 2 with one procedural variation: Instead of a mixed order of primes, a blocked order was used in Task 3.

In all tasks, in addition to the OCPD words, we also presented high and low self-esteem words (e.g., "clever" vs. "stupid"). These were included to assess the content specificity of

the hypothesized Simon effects (participants high in OCPD traits should not show Simon effect for these words), and to compare the results with former research in which self-esteem words were used. In order to relate the results to direct measures of OCPD beliefs and self-esteem, participants also completed the Rosenberg Self-Esteem-Scale (RSES; Rosenberg, 1965) and the Personality Disorder Belief Questionnaire (Arntz et al., 2004).
In sum, the major aim of this study was to investigate if people scoring high on OCPD traits are characterized by automatic content-specific associations, and to what extent the automatic associations are related to direct self-reports. We expected participants scoring high on OCPD traits to associate themselves with features like "responsible" and "conscientious", whereas others should be associated with features like "irresponsible" and "incompetent". Moreover, these associations should be content-specific, and should not extend to generally positive or generally negative self-esteem or other-esteem.

Method

Participants

A group of 245 first year students of Health Sciences completed the Dutch version of the SCID-Personality Questionnaire (SCID-IIQ; First et al., 1997). Participants (N=40; 32 women, 8 men) were selected on the basis of their scores on the SCID-II-Q and were divided into a high and low obsessive-compulsive personality group. Participants were selected for the high OCPD group if they met 5 or more traits of the obsessive-compulsive personality disorder according to the SCID-II-Q (range 0- 8), with the restriction that they did not meet just as much or even more criteria of one of the other DSM-IV personality disorders. Participants were selected for the low OCPD group if they met no more than one of the OCPD criteria. Mean age of the participants was 19.8 years (range 18-24). There were no significant sex differences among the high and low OCPD group.

Self-report Instruments

The following questionnaires were used: (1) The Dutch version of the SCID-Personality Questionnaire (SCID-IIQ; First et al., 1997): Results of studies by Gubbels (1991) and Quimette and Klein (1995) indicated that the "SCID-IIQ for DSM-III-R PDs" has reasonable psychometric properties. The SCID-II subscales correlated positively with the corresponding subscales of the paper and pencil version, and these correlations were considerably higher than those with non-corresponding subscales (correlation corrected for attenuation between the SCID-II and SCID-IIQ OCPD subscale = .87; Gubbels, 1991). To the best of the authors' knowledge, no data are available with respect to the

psychometric properties of the SCID-IIQ for DSM-IV PDs. Internal consistency of the OCPD subscale in this study was moderate (Cronbach's Alpha = .56, *N* = 245). (2) The Rosenberg Self-Esteem-Scale (RSES; Rosenberg, 1965): The results of a study by Beekers (1982) indicated that the internal consistency of the Dutch version of the RSES is good. (3) The Personality Disorder Belief Questionnaire (Dreessen, Arntz, & Weertman, 1996): The PDBQ is a Dutch self-report belief questionnaire partly formulated on the basis of Beck et al. (1990) and partly hypothesized by the constructors, based upon theoretical considerations and their clinical experience with patients with personality disorders (Dreessen, 1998). The obsessive compulsive PD subscale of the PDBQ consists of 20 beliefs that have to be rated on a 100 mm Visual Analogue Scale (VAS) in terms of strength of belief. Item ratings are expressed in mm, with higher scores indicating stronger belief in the formulated statement (minimum score = 0, maximum score = 100). Internal consistency of the OCPD subscale in the present study was high (Cronbach's alpha = .85). A study of Arntz et al. (2004) provides further support for the psychometric qualities of the PDBQ in a sample of 643 participants.

Simon Tasks.

In each task, the same 32 words were used as stimuli and were presented in a fixed random order (see Appendix for the complete stimulus list). The words were either OCPD-self words (e.g., perfectionist, conscientious), OCPD-other words (e.g., indifferent, irresponsible), high self-esteem words (e.g., good, worthy) and low self-esteem words (e.g., inferior, stupid). The selection of the OCPD words was based on the cognitive formulation of the OCPD view of self and view of others as described by Beck and colleagues (Beck et al., 1990; Beck, 1998). The self-esteem words were selected on the basis of former studies of implicit self-esteem (De Jong, 2002; De Jong & Bougie, submitted). In Task 1, each word was presented twice in Dutch and twice in English, yielding a total of 128 trials.

In Task 2, the same trials were used with two changes. First, each stimulus word was preceded equally often by the primes "I am" and "Others are", in a mixed order (yielding a total of 128 trials). Second, participants responded to Dutch and English stimulus words by saying "Yes" or "No". Task 3 contained the same trials as Task 2, although in a different order. Here the primes were presented in a blocked and counterbalanced order, such that each participant first received half of the trials preceded by one prime, followed by the other half of the trials preceded by the other prime. The presentation of self-referent and other-referent trials in a mixed order might have the advantage that it diminishes the chance of habituation to the prime. Yet, on the negative side, mixed presentations might result in insufficient priming of the relevant schemas. Presentation of

the self-referent and other-referent trials during separate stages of the task probably has the opposite effects (stronger accessibility of the relevant schemas, but perhaps also a weaker influence of the primes due to habituation). In the absence of empirical data to guide our choice, we decided to include both variants in the present design by presenting trials in a mixed order in Task 2 and in a blocked order in Task 3.

For counterbalancing reasons, all three tasks consisted of two versions each, such that the responses "I" and "others", or "yes" and "no" were given with equal frequency to Dutch and English words. Each participant received both versions of each task in a counterbalanced order. The order of Tasks 1, 2, and 3 was also counterbalanced across participants. The tasks were programmed in MEL (Schneider, 1996). Response latencies were measured by means of a microphone that was connected to a voice key (Mel Response Box; Psychology Software Tools). A 486-40 MHz personal computer controlled experimental instructions, stimulus presentation, and the recording of participants' responses and response times.

Procedure

Administration of the tasks was divided into two sessions (with a maximum interval of 16 days). During the first session, participants first filled in the RSES and PDBQ and were asked to read a list of English target words used in the three tasks to learn the Dutch meaning of these words. After participants indicated that they were ready, the experimenter tested whether participants could correctly provide the meaning of the English words. Next the sensitivity of the microphone was tested. Then participants read the instructions from the computer screen and the task started. Each task started with two practice trials, after which the experimental trials started. For Task 1, each trial consisted of the following order of events: a blank screen (500ms), a marker in the middle of the screen to alert the participant (1000ms), a blank screen (500ms), the stimulus word (presentation time depended on the reaction time of the participant, 2500ms at most). After each trial, the experimenter had 2000 ms time to register the participant's response by means of an interface button (1 = "I", 2 = "Others", 3 = voice key failed to register the response correctly). For Tasks 2 and 3, each trial consisted of the following order of events: a blank screen (500ms), the prime "I am" or "Others are" in the middle of the screen (1000ms), a blank screen (500ms), the stimulus word (presentation time depended on the reaction time of the participant, 2500ms at most). After each trial, the experimenter had 2000 ms time to register the response that was given by means of an interface button (1= "Yes", 2= "No", 3 = voice key failed to register the response correctly). During the first session, participants completed 3 of the 6 task versions. The other 3 versions were completed during the second session.

Results

Questionnaires

Confirming the validity of the selection procedure, the high OCPD group scored considerably higher on the OCPD subscale of the PDBQ than the low OCPD group, $t(36) = 4.26$, $p < .01$, (one-tailed), $d = .82$, computed according to Cohen, 1988. The difference between the high and low OCPD group with respect to their scores on the RSES was only marginally significant, $t(36) = 1.84$, $p = .08$, (two-tailed), $d = .30$.

Simon Tasks

Reaction times (RTs) on OCPD words and self-esteem words were analyzed separately. Before the analyses, RTs of trials with voice key failures or incorrect responses were excluded. Due to technical problems, not all participants had complete data sets for all tasks. Therefore, the analyses reported below are based on slightly different sample sizes, as indicated below. In all analyses, only trials with Dutch stimulus words were included because we expected the comprehension of relatively unknown foreign language words to be far less automatic than the comprehension of native language words[2].

Task 1: No Primes; Response "I" Versus "Other"

Due to technical problems, the data of 6 participants were missing from this analysis, leaving 16 high and 18 low OCPD participants. Voice key failures occurred on 0.6% of all trials in Task 1. Incorrect responses were given on 3.9% of the remaining trials. Mean RTs for Dutch words for each group are shown in Table 1.

Table 1.

Results of Task 1: Mean Reaction Times (SEs) on Dutch words for each Group as a Function of Word Content and Required Response

	Low OCPD				High OCPD			
Response	"I"		"Others"		"I"		"Others"	
Word Content								
OCPD-self	715	(27)	749	(30)	664	(28)	732	(32)
OCPD-others	651	(25)	714	(30)	641	(27)	678	(32)
High SE	621	(23)	719	(29)	624	(26)	708	(32)
Low SE	647	(24)	704	(26)	650	(26)	700	(29)

[2] Indeed, additional analyses of the English stimulus words did not reveal systematic effects.

OCPD words. A Group (high OCPD/ low OCPD) x Word Type (OCPD-self view / OCPD-other view) x Response ("I" / "others") ANOVA was computed for the Dutch OCPD words. The most important result of this ANOVA was the presence of a differential Semantic Simon effect, as evidenced by a significant Group x Word Type x Response interaction, $F(1,32) = 6.2$, $p = .02$, $d = .43$. As hypothesized, high OCPD participants showed facilitation on OCPD-congruent trials compared to OCPD-incongruent trials, whereas low OCPD participants showed the opposite pattern (see Figure 1). Subsequent tests, separately for each group, indicated that the facilitation of OCPD-incongruent trials in the low OCPD group was significant, $t(17) = 2.05$, $p = .03$ (one-tailed), $d = .48$, and the facilitation of OCPD-congruent trials in the high OCPD group was marginally significant, $t(15) = 1.55$, $p = .07$, $d = .39$. In addition, significant main effects for Word Type, $F(1,32) = 55.26$, $p < .01$, $d = 1.28$ and for response, $F(1,32) = 13.59$, $p < .01$, $d = .63$ were also observed, indicating that, in general, participants were relatively fast on OCPD-others trials, as well as on trials on which "I" was the required response.

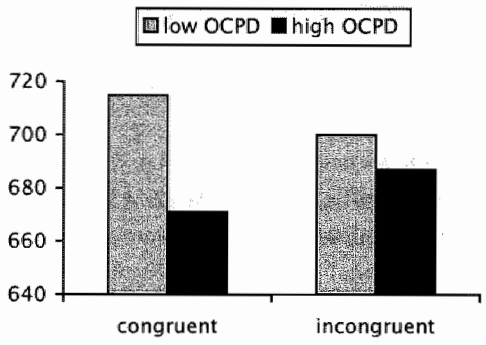


Figure 1.

RTs (ms) on congruent trials and incongruent trials in Task 1 for each group

To relate the results of Task 1 to the PDBQ, we composed a facilitation score for the OCPD trials (facilitation = incongruent trials [saying "others" on OCPD-self words and saying "I" on OCPD-other words] minus congruent trials [saying "I" on OCPD-self words and saying "others" on OCPD-other words]). The correlation between this facilitation score and the OCPD subscale of the PDBQ was statistically significant (Pearson $r = .30$, $p < .05$, one-tailed).

Self-esteem words. For the Dutch self-esteem words, a Group x Word Type (high versus low self-esteem) x Response (I / others) ANOVA was computed. For these words, the

critical Group x Word Type x Response interaction was not significant, $F(1,31) = 0.05$ $p = .82$, $d = .04$. Instead, there was a significant Word Type x Response interaction, $F(1,31) = 6.05$, $p = .02$, $d = .43$, which was similar for both groups. When the required response was "I", participants generally responded more quickly to high self-esteem words than to low self-esteem words, $t(35) = 3.6$, $p < .01$ (two-tailed), $d = .60$. When the required response was "others", there was no difference between RTs for high and low self-esteem words, $t(34) = 1.0$, $p = .33$, $d = .20$. These results indicate that, in general, participants displayed a high self-esteem and a neutral (or ambivalent) other-esteem. Moreover, there was no correlation (Pearson $r = -.09$, $p = .60$, two-tailed) between the RSES and the composed facilitation score for the high self-esteem trials (saying "I" on low self-esteem words minus saying "I" on high self-esteem words).

Task 2: Primes "I Am" Versus "Others Are"; Response "Yes" Versus "No"; Mixed Order

The data of 4 participants were missing due to technical problems, leaving 18 high and 18 low OCPD participants for the analysis. Voice key failures occurred on 0.80% of all trials in Task 2. Incorrect responses were given on 6.4% of the remaining trials. The two groups did not differ in these respects. Mean RTs for Dutch words for each group are shown in Table 2.

Table 2.

Results of Task 2: Mean Reaction Times (SEs) on Dutch Self-Referent and Other-Referent Trials for each Group as a Function of Word Content and Required Response

	Low OCPD				High OCPD			
Response	"Yes"		"No"		"Yes"		"No"	
				"I am..."				
Word Content								
OCPD-self	668	(21)	789	(33)	654	(21)	716	(33)
OCPD-others	668	(23)	707	(28)	662	(23)	703	(28)
High SE	618	(23)	697	(35)	607	(23)	688	(35)
Low SE	684	(31)	737	(27)	683	(31)	708	(27)
				"Others are..."				
Word Content								
OCPD-self	693	(31)	744	(28)	693	(31)	727	(28)
OCPD-others	725	(32)	728	(29)	673	(32)	678	(32)
High SE	668	(29)	731	(30)	668	(29)	700	(30)
Low SE	688	(28)	729	(25)	654	(28)	677	(25)

OCPD words. A Group (high OCPD/ low OCPD) x Reference (self vs. others) x Word Type (OCPD-self view / OCPD-other view) x Response (Yes / No) ANOVA for the Dutch words

was computed. As the most important result of this analysis, we found that the predicted Group x Reference x Word Type interaction was significant, $F(1,32) = 9.53$, $p < .01$, $d = .53$. The high OCPD group showed facilitation on OCPD-congruent trials (OCPD-self words preceded by "I am" or OCPD-other words preceded by "others are") compared to OCPD-incongruent trials (OCPD-self words preceded by "others are" or OCPD-other words preceded by "I am"), whereas the low OCPD group showed inhibition of OCPD-congruent trials compared to incongruent trials. There was no Group x Reference x Word Type x Response interaction, meaning that this pattern of results was irrespective of the required response (i.e., "yes" vs. "no"). Subsequent tests for each group indicated that inhibition of congruent OCPD-trials in the low OCPD-group was significant, $t(17) = 2.76$, $p = .01$ (one-tailed), $d = 0.65$. Facilitation of congruent OCPD-trials in the high OCPD-group was marginally significant, $t(17) = 1.68$, $p = .06$ (one-tailed), $d = 0.40$. In addition to the critical interaction, a number of other interactions and main effects were also found to be significant (Response; Word Type; Word Type x Response; Reference x Response). None of these were relevant to our hypotheses. To relate the results of Task 2 to the PDBQ, we again composed a facilitation score for the OCPD trials. The correlation between the facilitation score (facilitation = incongruent minus congruent OCPD trials) and the OCPD subscale of the PDBQ was significant (Pearson $r = .28$, $p < .05$, one-tailed).

Self-esteem words. For Dutch self-esteem words, a Group (high OCPD/ low OCPD) x Reference (self vs. others) x Word Type (low self-esteem / high self-esteem) x Response (Yes / No) ANOVA was computed. As expected, this ANOVA did not reveal a significant interaction of Group, Reference, and Word Type $F(1,32) = 1.08$, $p = .31$, $d = 0.18$. Instead, a number of other interactions and main effects were statistically significant. Most importantly, there was a significant interaction of Word Type and Reference, $F(1,32) = 24.02$, $p < .01$, $d = .84$, which was independent of group: On self-referent trials, all participants responded more quickly to high self-esteem words than to low self-esteem words, $t(35) = 5.63$, $p < .01$ (two-tailed), $d = .93$. There was no difference between high and low self-esteem words on other-referent trials, $t(35) < 1$, $d = .04$. To relate the results of Task 2 to the RSES, we again composed a facilitation score for self-esteem trials. There was no significant correlation between this facilitation score (low self-esteem trials minus high self-esteem trials) and the RSES (Pearson $r = .21$, $p = .11$).

Task 3: Primes "I Am" Versus "Others Are"; Response "Yes" Versus "No", Blocked Order

Again, the data of 4 participants were missing due to technical problems, leaving 17 participants in the high OCPD group and 19 participants in the low OCPD group. Voice key failures occurred on 0.8% of all trials in Task 3. Incorrect responses were given on

4.8% of the remaining trials. The two groups did not differ in these respects. Mean RTs for Dutch words for each group are shown in Table 3.

Table 3.
Results of Task 3: Mean Reaction Times (SEs) on Dutch Self-Referent and Other-Referent Trials for each Group as a Function of Word Content and Required Response

	Low OCPD				High OCPD			
Response	"Yes"		"No"		"Yes"		"No"	
				"I am..."				
Word Content								
OCPD-self	649	(31)	723	(33)	702	(33)	699	(35)
OCPD-others	666	(37)	696	(39)	719	(39)	716	(41)
High SE	592	(30)	677	(31)	650	(31)	682	(33)
Low SE	659	(33)	682	(35)	711	(35)	684	(37)
				"Others are..."				
Word Content								
OCPD-self	726	(38)	758	(36)	725	(41)	766	(38)
OCPD-others	671	(30)	695	(28)	673	(31)	719	(30)
High SE	648	(35)	684	(34)	665	(37)	763	(35)
Low SE	660	(36)	682	(34)	678	(38)	734	(36)

OCPD words. A Group (high OCPD/ low OCPD) x Reference (self vs. others) x Word Type (OCPD-self view / OCPD-other view) x Response (Yes / No) ANOVA for the Dutch OCPD words was computed. In contrast to our expectations, no interactions with the Group factor were found, particularly not the predicted Group x Reference x Word Type interaction, $F(1,32) = 1.58$, $p = .22$, $d = 0.21$. Instead, the analysis revealed a significant main effect for Word Type, $F(1,32) = 17.44$, $p < .01$, $d = .70$: Participants were generally faster on OCPD-other words than OCPD-self words. Furthermore, there was a significant interaction of Word Type and Reference, $F(1,32) = 24.23$, $p < .01$, $d = .82$, indicating that participants responded generally quickly to OCPD-self words preceded by "I am" and to OCPD-other words preceded by "others are". To relate the results of Task 3 to the PDBQ, we again composed a facilitation score for the OCPD trials. The correlation between the facilitation score (facilitation = incongruent minus congruent OCPD trials) and the OCPD subscale of the PDBQ was not significant (Pearson $r = -.15$, $p = .37$, two-tailed).

Self-esteem words. The Group (high OCPD/ low OCPD) x Reference (self vs. others) x Word Type (high versus low self-esteem) x Response (Yes / No) ANOVA for the Dutch self-esteem words revealed only one effect of interest: a significant interaction of Word

Type and Reference, $F(1,32) = 8.4$, $p < .01$, $d = .48$, independent of group. As in Task 2, subsequent tests indicated that on self-referent trials, participants were faster on high self-esteem words than on low self-esteem words, $t(35) = 4.20$, $p < .01$, $d = .70$. There was no difference between high and low self-esteem words on other-referent trials, $t(35) < 1$, $d = .03$. Interaction effects involving the Group factor were not significant. To relate the results of Task 3 to the RSES, we again composed a facilitation score for self-esteem trials. The correlation between this facilitation score (low self-esteem trials minus high self-esteem trials) and the RSES was not significant (Pearson $r = .27$, $p = .11$, two-tailed).

Discussion

In this study, three irrelevant feature paradigms based on the Semantic Simon Task were used to investigate implicit self- and other representations in people scoring high versus low on OCPD traits. In all three tasks, language (Dutch or English) was the relevant stimulus feature and word content (OCPD-self / OCPD-other / high self-esteem / low self-esteem) was the irrelevant feature. The results of the modified Semantic Simon Task (Task 1) support the idea that people with obsessive-compulsive personality disorder traits are indeed characterized by automatic content-specific representations of themselves and of others. Furthermore, the results of the self-esteem trials indicate that these Simon effects are content-specific and not general effects of positive or negative valence. That is, all participants showed a positive self-esteem and a neutral other-esteem.

The latter finding is consistent with previous studies that often found that people are characterized by a positive implicit self-esteem (De Jong, 2002; Greenwald & Banaji, 1995), and thus sustain the validity of the Simon Task that was used in the present study. Furthermore, participants showed a positive self-esteem and a neutral other-esteem: They responded relatively fast on trials with high self-esteem words compared to trials with low self-esteem words when the required response was "I", whereas such a differential facilitation effect did not emerge when the required response was "Others". This finding suggests that, although the Simon Task used in Task 1 was expected to measure bipolar associations, it is still sensitive to differences between target concepts (in this case, differences between "I" and "others").

In Task 2, a primed irrelevant feature paradigm was used to investigate self-associations and other-associations separately from each other. This task revealed the predicted interference pattern for OCPD words, that is, the high OCPD group showed facilitation on OCPD-congruent trials compared to incongruent trials, whereas the low OCPD group showed the opposite pattern. Unexpectedly, this pattern of results was irrespective of the

required response (i.e., "yes" vs. "no"). It seems that presenting people with incongruent information (e.g., "I am"... "unthinking"), resulted in a general deceleration of the task, irrespective of the required response. Consistent with such an explanation, the interference effects were stronger in Task 2 than in Task 3. In fact, Task 3 was only found to be sensitive to the global positive/negative dimension whereas no interference effects emerged for the more subtle differences in the context of OCPD words. In Task 2, the primes ("I am" vs. "others are") were presented intermixed in an unpredictable order, whereas in Task 3, the two primes appeared in separate parts of the task. It seems reasonable to assume that distraction caused by the prime is relatively strong when prime content is unpredictable (Task 2). Following this, presentation of each type of prime in a separate part of the task will result in relatively weak distraction by the primes (Task 3).

The strength of the differential interference effects of the prime (I am vs. Others are) in Task 2 was very similar to the Simon effect obtained in Task 1 (d = .53 vs. d = .43). However, the absence of the expected interference effects of the response requirement precludes a straightforward interpretation of the results of Task 2. So for the aim of this study, namely for measuring self-associations and other-associations in OCPD traits, the Simon Task of Task 1 seems most promising.

In line with results of previous studies (De Jong, 2002; De Jong et al., 2003; Greenwald, McGhee, & Schwartz, 1998; Swanson, Rudman, & Greenwald, 2001; Wiers, van Woerden, Smulders, & De Jong, 2002), correlations between the indirect indices and the direct measures were low in the present study. Obviously, low correlations can be obtained for various reasons. One explanation, often mentioned in the literature, is that direct and indirect measures tap onto different aspects of the same underlying construct. Second, the PDBQ and the RSES may not be optimal direct equivalents of the Simon Task because the items of the PDBQ and RSES do not correspond precisely to the words used in the Simon Tasks.

To the best of our knowledge, the current study is the first one to apply Simon tasks to the study of associations in people scoring high versus low on OCPD personality traits. Because of the novelty of this approach, we had to face several potential methodological problems. First, we chose language (Dutch or English) as the relevant feature that participants had to respond to. This choice was based on the suggestion that responding to language requires deeper semantic processing than responding to perceptual features like color or letter case. Although our choice turned out to be successful, it can hardly be called efficient because we had to include many trials (precisely the 50% English ones) although they were never meant to be analyzed. Further studies should compare tasks with different relevant features (such as grammatical category and letter case) to find a

relevant feature that is as powerful as language and at the same time more efficient in measuring implicit associations.

Another potential problem is related to the use of "I" vs. "Others" as the relevant response feature of Task 1, because it does not allow to measure unipolar associations with the self and/or with others. In other words, in Task 1, the observed Simon effect may be attributable to a relatively strong association of a certain attribute with the self, or a relatively weak association with others, or to both (a similar argument applies to the popular "Implicit Association Test" introduced by Greenwald et al., 1998). Although this bipolar nature of the task reflects the hypothesized representations of OCPD patients well, it would be helpful to separate self-representations from other-representations. This was attempted in Tasks 2 and 3, which used "I am" versus "Others are" as primes instead of responses. However, in the absence of the expected interference effects of response requirement the results of these Tasks should be interpreted with some caution. Thus, this question will have to be answered by future studies.

Finally, we should be careful when trying to extend the present results from people scoring high in OCPD traits to patients with an OCPD diagnosis. Using the SCID-IIQ, we could only assess whether the participants scored relatively high or low on OCPD traits. In order to diagnose OCPD, one has to conduct at least a semi-structured interview. However, we have to put this limitation into perspective because of the growing empirical support for a dimensional model of personality disorders (Clark, Watson, & Reynolds, 1995; O'Conner & Dyce, 1998; Widiger & Costa, 1994). Furthermore, the fairly low internal consistency of the OCPD subscale of the SCID-II could be interpreted as problematic in the sense of lack of reliability. In contrast, low internal consistency could also be due to the multidimensional characteristics of the OCPD subscale. If the latter is the case, the Simon effects found in the present study are even more impressive.

To summarize, what are the implications of the present results for clinical practice and further research in information processing in personality disorders? First, the Simon effects of the present study support the hypothesized self-representations and other-representations of OCPD according to the cognitive model, on both the implicit and the explicit level. Second, results of the self-esteem trials suggest that these representations are content-specific and that people with OCPD traits are not characterized by low implicit self-esteem. Further research in clinical samples of PD patients is needed to investigate if this general positive self-esteem is also present in full-blown OCPD patients and whether OCPD contrasts with other PDs. For example, one could imagine that Borderline Personality Disorder (BPD) is characterized by typical self- and other-representations that differ from those in OCPD, and that BPD patients display a general negative implicit self-esteem.

With regard to the application of Simon Tasks as individual measures in the context of treatment-induced attitude change, further research is needed to assess the stability of the Simon effects and their predictive validity within treatment outcome studies. Results of recent studies (see Rusell & Olson, 2003) indicate that direct and indirect measures may predict different dimensions of behavior (i.e., implicit attitudes predict automatic responses and behaviors, whereas explicit attitudes predict more deliberate responses (Spalding & Hardin, 1999, Huijding & De Jong, in press). The underlying schemas in personality disorders are assumed to direct automatic responses and behavior, therefore, further research with direct as well as indirect measures will be valuable for validating the cognitive model of personality disorders, as well as the treatments based on this model.

Chapter 5

Dependent Personality Traits and Information Processing: Assessing the Interpretation of Ambiguous Information Using the TAT

Weertman, A., Arntz, A., Schouten, E., & Dreessen, L. (accepted for publication). British Journal of Clinical Psychology.

Abstract

This study was designed to investigate interpretation bias in people with dependent personality traits. Eight TAT-cards were administered to participants (n = 56) who scored high or low on DSM-III-R dependent personality pathology. Two independent judges rated the TAT-stories using a rating list based on the cognitive model of the dependent and paranoid personality disorder. Controlling for self-esteem, the dependent interpretation bias appeared to be specific for dependent personality pathology. SEM-analysis supported a mediation model in which beliefs mediate the relationship between DSM-III-R traits and interpretation bias. The findings in this study support the hypothesis that people with dependent traits are characterized by a schema-related interpretation bias and that this bias is mediated by dependent beliefs.

Introduction

Although in the past decades information processing in Axis I disorders has been extensively investigated, little is known about information processing in Personality Disorders (PDs). The present study was designed to test the cognitive model of dependent PD. It was decided to investigate a particular, but important, aspect of information processing, the interpretation of ambiguous information. Former research into interpretation bias has demonstrated that ambiguity triggers the tendency to selectively impose schema-related interpretations on information (Mathews & MacLeod, 1994). In case of several competitive interpretations, it can be hypothesized that people with a PD draw conclusions (from the given information) in conformity with their schemas. Because of the strong interpersonal character of dependent PD (Beck et al., 2004), the present study uses stimuli that activate cognitive structures related to interpersonal functioning. The Thematic Apperception Test (Murray, 1943) is particularly suited for assessing interpersonal relations (Westen, 1991). The stimulus is social but ambiguous as to the exact meaning of the relationships and internal state of the persons on the cards.
In the present study eight TAT-cards were used as stimulus material to measure interpretation bias in high and low dependent subjects. A rating list was developed based on the cognitive model of the dependent and paranoid PD according to Beck et al. (2004). The paranoid items served as a control category to test the specificity of the assumed interpretation bias. We tested the following hypotheses:

1. Dependent traits are related to dependent interpretation bias (stories with interpretations, emotions, thoughts and interpersonal relations that are assumed to

be typical of the schemas of dependent PD). This relation is determined by dependent beliefs. In other words, beliefs are an essential factor in information processing, mediating the relation between dependent traits and interpretation bias.

2. The assumed relation between dependent traits and dependent interpretation bias is disorder specific. We included paranoid PD in the model to test whether the interpretation bias is specific for dependent PD. We chose paranoid PD because it is a disorder from another DSM personality cluster (cluster A) compared to dependent PD (cluster C) and because participants showed enough variance on paranoid traits.
3. The dependent interpretation bias is not a result of a more general pathology variable, namely self-esteem (in general, low self-esteem and PDs are closely linked (Silverstone, 1991).

We would like to emphasize that we do not pretend to unravel the question whether beliefs predispose PDs or inverse. We were primarily interested in the question whether PDs are characterized by schema-congruent interpretation bias and if so, are beliefs an essential factor of this relation.

Method

Participants

A group of 56 participants (45 women, 11 men) scoring high (highest 33%) or low (lowest 33%) on the dependent subscale of the SCID-II questionnaire were selected out a group of 137 first year students of Health Sciences (Maastricht University). The mean age of the participants was 20.4 years (range 19-24). The gender distribution was not significantly different in the high and low dependent groups.

Materials

An adapted version of the SCID-Personality Questionnaire (SCID-IIQ; Arntz, van Beijsterveldt, Hoekstra, Eussen, & Sallaerts, 1992; First, Spitzer, Gibbon, & Williams, 1995) was used for measuring the DSM-III-R dependent and paranoid traits. Whereas the original SCID-IIQ has categorical scoring possibilities, the Dutch version we used, contains 100 mm Visual Analogue Scales (VASs).

The dependent and paranoid subscale of the Personality Disorder Belief Questionnaire (PDBQ; Dreessen, Arntz, & Weertman, 1996) were used to assess dependent and paranoid beliefs. Each scale consists of 20 beliefs hypothesized to be typical for the concerning PD. The beliefs have to be rated on 100 mm Visual Analogue Scales (VASs). Arntz, Dreessen, Schouten, & Weertman (2004) provide support for the psychometric qualities of the PDBQ in a sample of 643 subjects.

The Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965) consists of 15 items which have to be rated on five-point-scales (0= completely true, 5= completely untrue). The results of a study by Beekers (1982) indicated that the internal consistency of the Dutch version of the RSES is good (Cronbach alpha = .83, *N* = 201). In the present study the internal consistency was excellent (Cronbach alpha = .89).

The Thematic Apperception Test (TAT; Murray, 1943) is a widely used clinical instrument to reveal significant components of personality by presenting a series of pictures to a participant and encouraging him or her to tell stories about them, invented on the spur of the moment. Because the assessment time was limited, eight TAT cards were selected (3B/M, 4, 8G/F, 10, 12M, 13MF, 16 & 18).

The rating list consists of 15 items that refer to the story's main affect (e.g. dependent PD: anxious), the qualities of the interpersonal relationships (e.g. dependent PD: loss of relationships), the interpersonal strategies (e.g. paranoid pd: cautiousness), the self- (e.g. dependent PD: helpless) and other view (e.g. paranoid PD: malicious) of the dependent and paranoid PD and to general story themes. All items were an almost literal translation of the specific cognitive profiles of the dependent and paranoid PD as described by Beck et al. (2004), including the self-view, view of others, interpersonal strategy and main affect. Six psychotherapists working with PD-patients checked the disorder-specificity of the items of the TAT-rating list before the experiment started. They rated the disorder specificity of the original 16 items on 100 mm Visual Analogue Scales (VASs). Based on these results one item was discarded. The final 15 items were rated on 100 mm Visual Analogue Scales (VASs) (0 = not characteristic, 100 = extreme characteristic) by two independent raters. For each card, the stories of 12 participants were rated by both raters to determine the Intraclass Correlation Coefficient (ICC; Fleiss, 1981). The stories of the other participants were divided according to a fixed schema so that for each subject half of the stories were scored by rater 1 and the other half by rater 2.

Procedure

The experiment took place an average of two months after the SCID-IIQ and PDBQ data were collected. The first author, who was blind for the classification of the participants, administered the 8 cards in standard order (3B/M, 4, 8G/F, 10, 12M, 13MF, 16, 18). For each card, participants were asked to tell a story, including what was happening in the picture, what led to it, and what was going to happen (after Westen, 1991). Stories were recorded and later typed out.

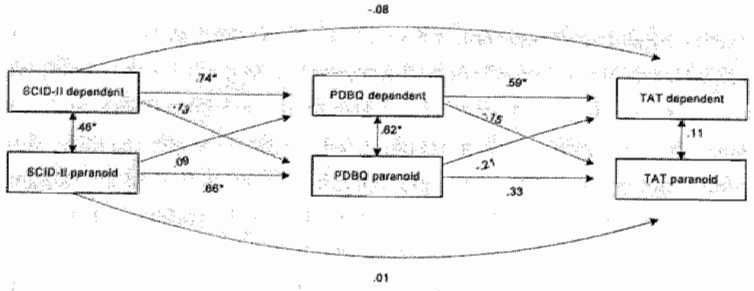
Results

To enhance power, scores of all the dependent and paranoid items (except for the general themes items) were combined into a dependent and paranoid sumscore. Furthermore, we combined z-scores of the sumscores of the dependent and paranoid items and the general themes items into a dependent and paranoid composite score. ICCs for dependent and paranoid sumscores (ICC= .97, .96) and for general dependent themes and general paranoid themes (ICC= .94 and .74), were good to excellent. The eights cards were analyzed together.

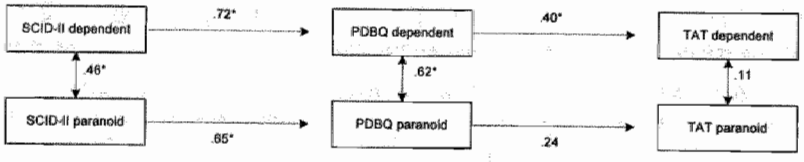
We tested the hypotheses by means of Structural Equation Modeling (SEM) (Lisrel 8.30, Jöreskog & Sörbom, 2000). We used the χ^2 goodness-of-fit statistic, the Comparative Fit Index (CFI: > .95 = good fit), the standardized root mean squared residual (SRMR: < .08 = good fit) and the root mean square error of approximation (RMSEA: < .06 = good fit) to determine the fit of the models (Hu & Bentler, 1999). Because the homogeneity of the dependent and paranoid sumscores for all cards together was moderate (Cronbach alpha = .59, .69), we analyzed the data with correction for attenuation for all paths to and between both composite scores (see Figure 1).

We first tested the hypothesis that dependent PD is characterized by specific interpretation bias and that dependent beliefs mediate this relationship (see Figure 1, model A). The model achieved a good fit (χ^2 = 2.46, *df* = 3, *p* = 0.48, CFI = 1.00, SRMR = 0.030 and RMSEA = 0.05). The paths between dependent beliefs and paranoid TAT scores and from paranoid beliefs to dependent TAT scores were negative and nonsignificant. The fit of the more parsimonious model B (see Figure 1) (χ^2 = 7.13, *df* = 9, *p* = 0.62, CFI = 1.00, SRMR = 0.075 and RMSEA = 0.04) appeared to be as good as the fit of model A (comparison of the nested models with chi-square, χ^2 = 4.67, *df* = 6, *p* = 0.59), endorsing the specificity of dependent and paranoid interpretation bias. Finally we added self-esteem to the mediation model to test if a more general pathology variable underlies dependent interpretation bias (model C). The fit of the model was good (χ^2 = 11.81, *df* = 10, *p* = 0.30, CFI = 0.99, SRMR = 0.093, RMSEA = 0.05). The results of model C indicate that the specific relationship between PD traits, PD beliefs and interpretation bias remain, even taken into account the role of self-esteem.

Model A



Model B



Model C

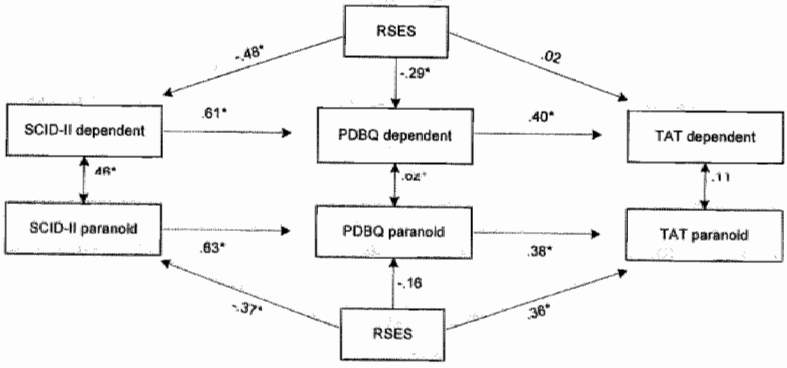


Figure 1.
Hypothesized SEM models and observed path coefficients

Discussion

The results of this study support the assumption that dependent PD is characterized by specific interpretation bias and that dependent beliefs mediate this relationship. Identical disorder-specific associations were found with respect to paranoid PD, when self-esteem is controlled for.

The results of the present study are consistent with the study of Dreessen, Arntz, Hendriks, Keune, & Van den Hout (1999), examining interpretation bias in avoidant PD. They found a relationship between avoidant PD and specific beliefs, and between specific beliefs and schema-related interpretation bias, but no direct relationship between avoidant personality pathology and the hypothesized bias.

Though PD traits according to the DSM-III-R and specific beliefs are associated, DSM-III-R traits refer to a broader concept compared to PDBQ beliefs. DSM-III-R defines PDs in terms of behaviours, emotions, and impulse control, and to a lesser extent in terms of beliefs. Viewed from the cognitive model, it is not surprising that specific beliefs appear to be more closely related to interpretation processing bias than DSM-III-R traits.

Several limitations of this study should be considered. We used an analogue sample: participants scored relatively high on a questionnaire. Second, we only administered the dependent and paranoid subscales of the SCID-IIQ and PDBQ.

Further research is needed to investigate the interpretation bias in personality disorders in a clinical sample.

Chapter 6

Influences of Beliefs and Personality Disorders on Treatment Outcome in Anxiety Patients

Weertman, A., Arntz, A., Schouten E., & Dreessen L. (2005). Journal of Consulting and Clinical Psychology, 73 (5), 936-944.

Abstract

The present study investigated the effects of personality disorders (PDs) and specific PD-related beliefs on the results of (cognitive-) behavioral therapy for anxiety disorders in a sample of 398 outpatients. The authors used a prospective design in which relationships between PD variables before treatment and outcome measures at posttest and follow-up were evaluated with multilevel analyses. People with PDs and PD-related beliefs reported higher symptom levels at outcome. However, these effects were not as strong as might be expected on the basis of prevailing clinical thought in this area. Dropout rates were not influenced by the presence of one or more PDs or PD-related beliefs. Results indicate that treatment of anxiety disorders in patients with concomitant one or more PDs is appropriate.

Introduction

In clinical practice it is often assumed that patients with personality disorder (PD) pathology benefit less from Axis I treatment than patients without PD pathology. Moreover, therapists tend to attribute treatment difficulties to supposed PDs in these patients and often argue that treatment of Axis I disorders in patients with one or more PDs results in shift of symptoms. For example, anxiety disorder treatment may reduce panic attacks but increase depression symptoms at the same time. The evidence supporting these notions for anxiety disorder patients has been far from conclusive. Results from studies focusing on the influence of PDs on treatment outcome of anxiety disorders have been inconsistent, and conclusions drawn from published reviews often have been conflicting.

Although several studies report no, or even positive, influence of PDs on anxiety disorder treatment outcome (Dreessen & Arntz, 1998a), other studies report negative effects for the presence of any PD and specific PDs. With respect to specific PDs, avoidant PD was most often found as a predictor of poor outcome, especially in panic disorder. Furthermore, negative effects on treatment outcome were found for the presence of dependent, paranoid, borderline, obsessive-compulsive, histrionic, and schizotypical PD (Dreessen & Arntz, 1998a; Mennin & Heimberg, 2000; Reich, 2003). Part of the difference between PD subjects and non-PD subjects may be due to increased dropout rates in the PD group as well as complicated interpersonal interactions in therapy. In addition, treatment modality seems to be an important factor influencing the relationship between PDs and treatment outcome. Dreessen and Arntz (1998a) found that most

pharmacotherapy studies showed negative effects of PD variables on treatment outcome, whereas most cognitive-behavioral therapy (CBT) studies showed no effects of PD variables on treatment outcome.

As with the anxiety literature, findings involving other Axis I disorders have been inconsistent. For example, in depression (Mulder, 2002; Reich, 2003), a disorder that is highly correlated with anxiety disorders, different effects were found of PDs on treatment outcome. An important finding of the National Institute of Mental Health Treatment of Depression Collaborative Research Program is that the effects on treatment outcome of PDs differ between conditions. PDs negatively affected treatment outcome of interpersonal therapy and imipramine, but the effect was less for the treatment outcome of cognitive therapy in depression (Shea et al., 1990). Further analyses of the National Institute of Mental Health Treatment of Depression Collaborative Research Program demonstrated that depressive PD, paranoid PD, and perfectionism were negatively related to outcome. The negative relation of perfectionism with treatment outcome was explained by the perfectionistic patients' failure to develop strong therapeutic alliances (Zuroff et al., 2000). Low correlations were found between patients' perfectionism and their PD features, suggesting that these two personality constructs are largely independent (Shahar, Blatt, Zuroff, & Pilkonis, 2003).

To the best of our knowledge, there is only one published study that investigated the influence of PD-related beliefs on treatment outcome in depression and none in anxiety disorders. Kuyken, Kurzer, DeRubeis, Beck, and Brown (2001) examined whether PD status and characteristic PD beliefs affect response to cognitive therapy of depression. They found that patients with depression and PDs show significant improvements in comparison with depressed patients without a PD. Avoidant beliefs (e.g., "If people get close to me, they will discover the real me and reject me") predicted limited improvement in self-reported depressive symptoms. Paranoid beliefs (e.g., "Other people will try to use me or manipulate me if I do not watch out") predicted limited improvement in general functioning as rated by the therapist.

On the basis of cognitive models of PDs, various authors have speculated on how specific PD-related beliefs might complicate CBT treatment in Axis I disorders. Beck et al. (2004) propose that PDs are characterized by typical cognitive structures (clusters of maladaptive beliefs, i.e., schemas) that represent the core of the pathology. These schemas (a) are central to one's sense of identity, (b) are active on a more continuous level compared with cognitive structures of Axis I disorders, (c) direct broader functioning, and (d) are hypothesized to be extremely resistant to modification. These schema characteristics may reveal themselves in cognitive and affective avoidance, hopelessness about changing, and difficulties in building a therapeutic alliance. Young, Klosko, and Weishaar (2003) assume

that not only some specific Axis II schemas but also many PD-related schemas have the potential to sabotage traditional CBT. Although Axis I disorder-related beliefs may influence treatment process, they are hypothesized to do so to a lesser degree than Axis II beliefs, as Axis I schemas are less generalized, less inflexible, and less prominent in the cognitive organization. Young et al. stated the specific problem of PD patients avoiding looking deeply into themselves, which has a negative influence on the therapy process. Young et al. further described the potential negative influence of mistrust and hostility beliefs because of their interference with the therapeutic alliance. The therapeutic alliance is a rather consistent predictor of CBT outcome (Keijsers, Schaap, & Hoogduin, 2000).

Considering the results of Kuyken et al. (2001) and the mentioned hypotheses of the cognitive model, we hypothesized that higher levels of maladaptive beliefs, especially avoidant and paranoid beliefs, have detrimental effects on therapy outcome. As for the results of Zuroff et al. (2000) concerning the negative relation of perfectionism with treatment outcome, we further specified our hypotheses concerning avoidant beliefs into two types of avoidance: beliefs about the need to avoid strong feelings and beliefs about the avoidance of failure resulting in perfectionism. We further hypothesized that Axis II hopelessness beliefs affect treatment outcome negatively. Several authors (e.g., Chambless & Giao, 1997; Keijsers et al., 2000) found that belief in improvement influences actual improvement in treatment. Although beliefs about hopelessness are not specific for PDs, we hypothesized that the typical ego-syntonic character of Axis II hopelessness and the lack of healthy beliefs about change or improvement (which are present in Axis I disorders) influence treatment outcome negatively.

In the current study, we used a prospective design among a sample of patients in treatment for anxiety disorders to examine the influence of PDs and PD-related beliefs on treatment outcome. Given that CBT and behavior therapy are the treatment of choice for anxiety disorders (DeRubeis & Crits-Christoph, 1998) and to exclude the possible influence of different treatment modalities, we limited this study to CBT. We tested the hypotheses of whether the following predictors negatively affect treatment for anxiety disorders: (a) the presence of any PD, (b) the presence of maladaptive PD-related beliefs in general, (c) beliefs about the need to control feelings, (d) beliefs about the need to avoid failure, (e) beliefs about mistrust, and (f) beliefs about hopelessness. We further explored the influence of specific PDs – according to the Diagnostic and Statistical Manual of Mental Disorders (3rd ed. rev.; DSM-III-R; APA, 1987; and 4th ed.; DSM-IV; APA, 1994) – and specific PD-related beliefs on outcome, because previous findings are inconsistent.

Method

Participants

Participants were 398 Dutch patients (165 men, 233 women) who were referred between 1993 and 2001 to the Academic Section of the Community Mental Health Center at Maastricht, the Netherlands, and agreed to participate in research. All of the patients were treated for an anxiety disorder and were assessed before start of the treatment by means of the Structured Clinical Interview for DSM-III-R Axis I Disorders (SCID-I: Spitzer, Williams, & Gibbon, 1987; Dutch translation: Koster van Groos, 1985; revision by Arntz, Bogels, & Hoekstra, 1992) and the Structured Clinical Interview for DSM-III-R Axis II Disorders (SCID-II: Spitzer, Williams, Gibbon, & First, 1990; Dutch translation: Psychiatric Center Bloemendaal, 1991) or by means of the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I: First, Spitzer, & Williams, 1997; Dutch translation: Groenestijn, Akkerhuis, Kupka, Schneider, & Nolen, 1999) and the Structured Clinical Interview for DSM-IV Axis II Disorders (SCID-II: First, Spitzer, Gibbon, Williams, & Benjamin, 1997; Dutch translation: Weertman, Arntz, & Kerkhofs, 2000). Patients with an acute psychotic episode were excluded. An overview of the first Axis I diagnoses is presented in Table 1.

Table 1.

Primary Diagnoses

Diagnosis	*n*	%
Agoraphobia	11	2.8
Panic disorder with agoraphobia	62	15.6
Panic disorder without agoraphobia	50	12.6
Specific phobia	28	7.0
Generalized anxiety disorder	33	8.3
Obsessive-compulsive disorder	52	13.1
Posttraumatic stress disorder	48	12.1
Social phobia	111	27.9
Anxiety disorder not otherwise specified	3	0.8

Note. $n = 398$

Within the total sample, 65.6% of the participants had two or more Axis I diagnoses. An overview of the second Axis I diagnoses is presented in Table 2.

Table 2.

Secondary Diagnoses

Diagnosis	n	%
Disorders diagnosed in infancy, childhood or adolescence	4	1.5
Substance-related disorders	9	3.4
Schizophrenia and other psychotic disorders	0	0
Mood disorders	120	46.0
Anxiety disorders	97	37.2
Somatoform disorders	13	5.0
Sexual and gender identity disorders	2	0.8
Eating disorders	4	1.5
Sleep disorders	2	0.8
Adjustment disorders	3	1.1
Other complaints	7	2.7

Note. $n = 261$

The mean age of the participants was 34.2 years (range = 18-60), and the mean duration of their primary Axis I diagnosis was 7.4 years. Of the participants, 62.3% were married or living together with a partner; 41% were part-time or full-time employed. Median level of education was intermediate vocational education. Sixty-one of the 398 patients did not participate in SCID-II interviews for various reasons, including scheduling problems and refusal. For the sample assessed with the SCID-II, the percentages of the specific PD diagnoses (including multiple diagnoses) are presented in Table 3. All participants signed informed consent.

Table 3.
SCID-II Personality Disorders (PD's)

Disorder	*n*	%
Avoidant	84	24.9
Dependent	22	6.5
Obsessive-compulsive	31	9.2
Passive-aggressive	6	1.8
Paranoid	16	4.7
Schizotypal	1	0.3
Schizoid	0	0
Histrionic	3	0.9
Borderline	5	1.5
Narcissistic	1	0.3
No PD	212	62.9
One PD	91	27.0
More than one PD	34	10.1

Note. $n = 337$.

Interviewers and Therapists

Twenty-one interviewers participated in this study, of which 9 had participated in our SCID-II reliability studies, which had demonstrated good interrater reliabilities (Arntz et al., 1992; Dreessen & Arntz, 1998b; Weertman, Arntz, Dreessen, Van Velzen, & Vertommen, 2003). The other 12 interviewers were trained thoroughly by doing joint interviews with several experienced interviewers who had participated in our reliability studies. Furthermore, 44 therapists participated in this study, including the 21 interviewers mentioned above. All therapists were well trained in cognitive and behavioral treatment techniques. Interviewers and therapists were all Caucasian.

Treatment Methods

All patients were individually treated for an Axis I anxiety disorder. The main part of the participants (67.8%) received cognitive therapy (regardless of whether combined with behavioral therapy. The remaining 32.2% of the participants received pure behavioral therapy. Most of the therapies were brief (mean number of treatment sessions was 14) and standardized, meaning that the therapist followed treatment manuals, often within the framework of comparative therapy-effect studies. During the month following the treatment period, patients did not receive any additional treatment. After this month, additional treatment was administered if clinically indicated.

Assessments

Along with the SCID-I and the SCID-II, the following measures were used: Fear Questionnaire (FQ; Marks & Matthews, 1979), 90-Item Symptom Checklist (SCL-90; Derogatis, 1977; Dutch translation and adaptation: Arrindell & Ettema, 1981), Personality Disorder Belief Questionnaire (PDBQ; Dreessen, Arntz, & Weertman, 1996), and therapist judgments at the end of therapy.

The FQ is a self-report 17-item scale designed to assess the degree of fear and avoidance of specific fears (main phobia, agoraphobia, social phobia, and blood and injury phobia) using a 9-point scale. Psychometric data show that the FQ is psychometrically valid and reliable (Marks & Matthews, 1979; Oei, Moylan, & Evans, 1991). In a sample of 251 anxiety disorder patients, the internal consistency of the FQ total score was found to be high (Cronbach's α = .83). The discriminant validity of the subscales was adequate (Oei, Moylan, & Evans, 1991).

The total score of the SCL-90 can be used as a measure for general psychopathology. Psychometric properties of the Dutch version of the SCL-90 have been shown to be satisfactory in different populations, including anxiety disorder patients (Arrindell & Ettema, 1981).

The PDBQ is a Dutch self-report questionnaire that contains 12 subscales of 20 beliefs, each hypothesized to be typical for the 12 DSM-IV PDs. The beliefs are partly formulated on the basis of Beck et al.'s (2004) work and partly by use of the authors' own clinical experience with patients with PDs. The beliefs have to be rated on a 100-mm Visual Analog Scale in terms of strength of belief. Item ratings are expressed in millimeters, with a higher score meaning stronger belief in the formulated statement (minimum score = 0, maximum score = 100). Because the assessment time was limited, we measured only six subscales corresponding to the most frequently diagnosed PDs in this population (avoidant, obsessive-compulsive, dependent, paranoid, histrionic, and borderline PD). Arntz, Dreessen, Schouten, and Weertman (2004) tested the psychometric qualities of this short version of the PDBQ in a sample of 643 subjects, which included the participants of the present study. By means of factor analytic techniques, the hypothesis was tested that factors could be derived from the PDBQ that correspond to the hypothesized subscales. Next, psychometric properties were improved by item selection. Internal consistencies of the new subscales (as used in the present study) were all in the good-excellent range (.83-.96). Structural equation modelling, correlating the six subscales to their corresponding PD (as assessed by means of the SCID-II) supported the criterion validity of the scales. Furthermore, ANOVA trend analysis revealed that there was a monotonical increase in scores on each belief subscale from nonpatient controls, to patients without

any PD, to patients with PDs other than the pertinent PD, to patients with the pertinent PD (Arntz et al., 2004).

Therapist judgments at the end of therapy were measured by means of a short questionnaire including the evaluation by the therapist of the general end-state functioning of the patient and the improvement of the main complaint (worsened, unchanged, improved, strongly improved, or without complaints), the number of therapy sessions and how the therapy was ended (regular, by agreement, or one-sided by patient or therapist).

Procedure

Following the standard procedure, the interviewer administered an unstructured clinical interview, followed by the SCID-I. In case of several Axis I diagnoses, the primary diagnosis was determined by three factors: (a) which disorder was associated with the greatest distress or life interference, (b) which disorder was the main complaint according to the patient, and (c) the order of development. Next, after informed consent had been obtained, the SCID-II interview was administered. Both patients and therapists were kept blind to the results of the SCID-II interview and PDBQ. The PDBQ was administered once, before start of the treatment. Patients completed the FQ and SCL-90 four times, namely, before start of treatment, at the end of treatment, at 1-month follow-up (FU1), and at 6-month follow-up (FU2; see Table 4 for the assessment schedule).

Table 4.
Assessment Schedule

pretest	posttest	FU1	FU2
SCID-I			
SCID-II			
PDBQ			
FQ	FQ	FQ	FQ
SCL-90	SCL-90	SCL-90	SCL-90
	TR		

Note. FU1 = 1-month follow-up; FU2 = 6-month follow-up; SCID-I = Structured Clinical Interviews for DSM-III-R and DSM-IV Axis I disorders; SCID-II = Structured Clinical Interviews for DSM-III-R and DSM-IV Axis II disorders; PDBQ = Personality Disorder Belief Questionnaire; FQ = Fear Questionnaire; SCL-90 = 90-item Symptom Checklist. TR = therapist ratings at the end of therapy

Data Reduction and Statistical Analyses

We lost outcome data at several assessment moments. Concerning the FQ and SCL-90, outcome measures were available at the end of therapy for 325 and 326 patients,

respectively; at FU1 for 279 and 235 patients, respectively; and at FU2 for 165 and 140 patients, respectively. Therapist information at the end of therapy was available for 377 patients. Ninety-seven patients dropped out of the original treatment because of several reasons (not satisfied with the therapy and/or therapist, no symptoms anymore, change of treatment focus, changes in medication, lack of motivation, or pregnancy). However, the main part of these dropout patients (n = 53) still completed the posttest. Another 28 patients terminated participation in the study at posttest but completed their treatment. Reasons to terminate the study were, for example, lack of time, scheduling problems, or lack of motivation. At FU1 and FU2, we lost outcome data mainly because of scheduling problems and nonresponse.

Outcome measures

To enhance the power, we chose to use sum scores if subscales were highly correlated. The following outcome measures were used in the analyses: (a) Main Phobia-Fear rating (FQ subscale), (b) Main Phobia-Avoidance rating (FQ subscale), (c) FQ sum score (i.e., the sum of the Fear and Avoidance subscales of Agoraphobia, Social Phobia and Blood-Injury Phobia. The Fear and Avoidance subscales were highly correlated, Pearson r = .73, p < .001), (d) the total score of the SCL-90, (e) improvement of the main complaint (subscale of therapist judgments at the end of therapy), (f) general improvement (subscale of therapist judgments at the end of therapy), and (g) dropout rates (patients who dropped out of the original treatment).

Concerning the SCL-90 and the FQ, we used a pretest-posttest design, because we were interested in the end-state functioning, and controlled for initial levels of symptoms. In our opinion, the clinically relevant question is whether it is appropriate to treat patients with one or more concomitant PDs for an anxiety disorder. If we focused only on end-state functioning, we would neglect the general finding that patients with concomitant PDs often have higher pretest scores than those without a PD. In that case, patients with PD can have higher symptom scores after treatment, but if we take the pretest scores into account, they might have an end-state functioning that is comparable with that of patients without PD.

Predictors

Predictors were chosen on the basis of the hypotheses listed in the introduction. For the current investigation, we constructed four specific sets of beliefs, derived from the PDBQ: (a) beliefs about the need to control emotions, (b) beliefs about mistrust (which corresponds to the paranoid subscale of the PDBQ), (c) beliefs about not being allowed to

make mistakes, and (d) hopelessness. The internal consistencies of the four factors were all >.75 and correlations between the four factors were all <.55.

Statistical analyses.

Because of the accumulation of missing data in the successive assessment moments the usual repeated-measures analysis of variance was not advisable. Instead, the hypotheses were tested with multilevel analyses (MLwiN version 1.10.0007; Rasbash, Browne, Healy, Cameron, & Charlton, 2001). The repeated measures are at Level 1, and persons are at Level 2. For estimating the effects, we used the restricted iterative generalized least squares algorithm. A mixed-effect model was used, with a random intercept and random slope effects for all within factors. The four self-report outcome measures (Main Phobia-Fear rating, Main Phobia-Avoidance rating, FQ sum score, and total score of the SCL-90) were standardized along the assessment moments by means of four z-transformations. By doing so, we could consider these four outcome measures as a four-level within-subject factor, which we now refer to as the self-report outcome measures factor (or SROM factor). With respect to the other outcome measures rated by the therapist at the end of therapy -improvement of the main complaint and general improvement- these measures also were z-transformed and considered as a two-level within-subject factor, which we refer to as the therapist rating factor (TR factor). Dropout rates were analyzed by logistic regression. In all analyses, we controlled for the influence of age, gender, and duration of complaints (the latest was square root transformed to obtain a nearly normal distribution).

Because we did not formulate specific hypotheses concerning the influence of specific DSM-III-R and DSM-IV PDs and related beliefs on treatment outcome, we used forward regression analyses (which is a more exploratory variant of multiple regression) to analyze these data. We chose to use forward regression to deal with the problem of overcorrection when entering all variables simultaneously. Multiple regression also corrects for coincidental correlations between variables when the enter method is used and, thus, corrects even for nonsignificant (in reality, unlikely to exist) correlations. We only investigated PDs included both in the DSM-III-R and in the DSM-IV and with a frequency of five or higher in our sample.

Results

With respect to the self-report outcome measures (Main Phobia-Fear rating, Main Phobia-Avoidance rating, FQ sum score, and total score of the SCL-90), we found no three-way interactions between the SROM factor, measurement moment, and control variables (age,

gender, and duration of complaints) and no two-way interactions between measurement moment and control variables. This means that the influence of age, gender, and duration of complaints was the same at every measurement moment and for every outcome measure. Consequently, we omitted these interactions in all further analyses. We found no three-way interactions between SROM factor, measurement moment, and predictors, meaning that the relation between predictors and outcome were the same for every outcome measure and assessment moment. This interaction was therefore omitted in all further analyses, except for the predictor "beliefs about the need to control emotions," of which the influence differed significantly by measurement moment. For the predictor "the presence of any PD," there was an interaction with the SROM factor. Consequently, we analyzed the data for all self-report outcome measures separately with respect to the presence of any PD. For the other predictors, there were no two-way interactions with the SROM factor.

With respect to the therapist ratings, there were no TR Factor × Control Variables interactions. Consequently, we controlled only for main effects of age, gender, and duration of complaints in the final analyses. There was an interaction only between TR factor and the predictor "beliefs in general," meaning that we were able to analyze the results of improvement of the main complaint and general improvement together for the other predictors. We set alpha at .01, Bonferroni corrected (the usual .05 was divided by 5 for the five outcome measures: Main Phobia-Fear rating, Main Phobia-Avoidance rating, FQ sum score, total score of the SCL-90, and improvement rated by the therapist). Dropout rates were analyzed with an alpha of .05 because, in our opinion, dropout rates refer to an issue other than levels of symptoms.

Predictors of Outcome

The presence of any PD

For each group (patients with and without any PD), means and standard deviations of all outcome measures are presented in Table 5.

Table 5

Mean and Standard Deviation Scores by Assessment Moment and Group

	No PD			Any PD		
Outcome Measure	*n*	*M*	*SD*	*n*	*M*	*SD*
Pretreatment						
Main Phobia-Fear	207	6.0	1.8	125	6.1	1.8
Main Phobia-Avoidance	206	6.1	1.9	125	6.1	2.0
FQ- sum score	210	76.9	39.0	127	94.5	39.9
SCL-90	210	188.5	57.2	127	229.3	62.7
Posttreatment						
Main Phobia-Fear	181	3.6	2.0	100	4.2	2.2
Main Phobia-Avoidance	181	3.9	2.3	101	4.7	2.4
FQ- sum score	181	58.8	34.2	102	75.9	43.6
SCL-90	182	156.3	51.2	103	184.6	69.7
TR specific	196	3.4	0.9	121	3.11	0.8
TR in general	195	3.1	0.87	121	3.0	0.8
1-month follow-up						
Main Phobia-Fear	158	3.7	2.1	84	4.2	2.2
Main Phobia-Avoidance	157	3.9	2.4	84	4.4	2.4
FQ- sum score	145	55.0	35.1	79	73.5	40.8
SCL-90	137	159.9	59.0	69	181.7	72.9
6-month follow-up						
Main Phobia-Fear	97	3.4	2.1	56	3.5	1.9
Main Phobia-Avoidance	97	3.5	2.4	55	4.1	2.5
FQ- sum score	83	55.5	37.0	51	64.8	35.2
SCL-90	80	159.1	59.6	51	166.3	63.5

Note. PD = personality disorder; Main Phobia-Fear = Main Phobia-fear Questionnaire; Main Phobia-Avoidance = Main Phobia-Avoidance subscale of the Fear Questionnaire; FQ- sum score = the sum of the Fear and Avoidance subscales of Agoraphobia, Social Phobia and Blood-Injury Phobia of the Fear Questionnaire; SCL-90 = the total score of the SCL-90; TR specific = improvement of the main complaint as rated by the therapist ; TR in general = general improvement as rated by the therapist.

Table 6 shows the results for the presence of one or more full-blown PD, regardless of type, controlled for the effect of initial level of symptoms, age, gender, and duration of complaints on the outcome measures. The results indicate that the presence of one or more PDs influences treatment outcome negatively with regard to the Main Phobia-Avoidance rating. The presence of any PD was an almost significant predictor of higher symptom levels on the Main Phobia-Fear rating and the FQ total score and of less improvement as rated by the therapist. To test the possibility that the treatment was

ineffective for people with PD in the presence of high anxiety, we tested whether there was an interaction between the presence of any PD and initial levels of symptoms. With regard to the Main Phobia-Avoidance and Main Phobia-Fear ratings, there was a significant interaction of PD presence with initial level of symptoms, β = .14, z = 2.34, p = .02; β = .13, z = 2.03, p = .04, respectively. We examined this interaction by correlating corrected outcome measures with baseline levels of symptoms and found that in particular, people with one or more PDs in the presence of high symptom levels at baseline reported higher symptom levels at outcome. The influence of symptom level at baseline was significant for all outcome measures (standardized beta coefficients ranged from .39 to .76, $p < .01$). There was no significant influence of age, gender, and duration of complaints on self-report outcome measures and improvement as rated by the therapist.

Table 6.

Effects of the Presence of Predictors on Self-Report Outcome Measures and Improvement as Rated by the Therapist

	Main Phobia- Fear rating			Main Phobia-Avoidance rating		
Predictor	β	z	p^a	β	z	p^a
Any PD	.12	2.35	.02	.15	3.10	<.01
Baseline symptoms	.39	7.09	<.01	.41	7.44	<.01
Gender	-.02	-0.40	.69	-.01	-0.13	.89
Age	.09	1.71	.09	.05	1.06	.29
Duration	-.04	-0.82	.41	-.03	-0.53	.60
	Fear Questionnaire sum score			SCL-90 total score		
Any PD	.07	1.98	.05	-.03	-0.61	.55
Baseline symptoms	.76	18.12	<.01	.71	15.77	<.01
Gender	-.06	-1.68	.09	-.06	-1.49	.14
Age	.06	1.61	.11	.05	1.17	.24
Duration	-.06	-1.72	.09	-.06	-1.35	.18
	Therapist rating					
Any PD	-.12	-2.31	.02			
Gender	.04	0.72	.47			
Age	-.02	-0.28	.78			
Duration	-.01	-0.16	.88			

Note. The β coefficient represents the standardized regression coefficient. With regard to the self-report outcome measures, a positive β coefficient indicates that the predictor was associated with higher symptom levels at posttest, 1-month follow-up, and 6-month follow-up. With regard to therapist ratings, a positive β coefficient indicates that the predictor was associated with more improvement as rated by the therapist. PD = personality disorder. Duration = duration of complaints.

[a] Only values less than .01 are significant, given the Bonferroni-corrected alpha level.

Beliefs in general

The results indicate that people with more PD-related beliefs in general have higher corrected symptom levels at outcome, $\beta = .12$, $z = 3.42$, $p < .01$ and improve less on their main complaint as judged by the therapist, $\beta = -.13$, $t(363) = -2.51$, $p = .01$, but not on therapist-rated general improvement, $\beta = -.04$, $t(362) = -0.79$, $p = .43$. There were no interactions between initial levels of symptoms and beliefs in general.

Specific sets of beliefs.

In Table 7 the results of the effects of specific sets of beliefs, controlled for initial levels of severity, influence of age, gender, and duration of complaints, are presented (we did not present the beta coefficients of the variables we controlled for because of the large amount of data). Beliefs about mistrust was a significant predictor of higher self-reported symptoms at outcome. Beliefs about avoiding failure and hopelessness were almost significant predictors of higher corrected symptom levels at outcome, and hopelessness also tended to predict less improvement as rated by the therapist. People with elevated levels of beliefs about the need to control feelings had significantly higher levels of symptoms at posttest and FU1 but not at FU2. There were no interactions between initial levels of symptoms and specific sets of beliefs.

Table 7.

Effects of Specific Sets of Beliefs, Controlled for Initial Levels of Symptoms, Age, Gender and Duration of Complaints on Self-Report Outcome Measure (SROM) and Improvement as Rated by the Therapist

	SROM			TR		
Predictor	β	*z*	*p*[a]	β	*z*	*p*[a]
Avoiding failure	.08	2.42	.02	0.1	0.19	.85
Mistrust	.11	3.29	<.01	-.07	-1.42	.16
Hopelessness	.07	2.22	.03	-.10	-2.10	.04
Control feelings				-.04	-0.82	.41
Posttest	.12	3.20	<.01			
FU1	.11	3.08	<0.1			
FU2	.02	0.48	.53			

Note. The β coefficient represents the standardized regression coefficient. With regard to SROM, a positive β coefficient indicates that the predictor was associated with higher symptom levels at posttest, FU1, and FU2. With regard to the therapist rating (TR) a positive *ß* coefficient indicates that the predictor was associated with more improvement as rated by the therapist. FU1 = 1-month follow-up; FU2 = 6-month follow-up.

[a] Only values less than .01 are significant, given the Bonferroni-corrected alpha level.

Separate personality disorders, as defined by the DSM-III-R and DSM-IV and related beliefs

We explored the influence of the separate PDs by analyzing change scores from pretest to posttest, FU1, and FU2 by means of forward linear regression analyses (we set probability of *F* entry at .05). We excluded the schizoid, schizotypal and narcissistic PD because the frequency of these PDs was less than five. We controlled for the influence of initial severity of symptoms, age, gender, and duration of complaints. The obsessive-compulsive PD was included in the model at posttest as a predictor of less improvement on the Main Phobia-Avoidance rating, $\beta = -.12$, $t(272) = -2.27$, $p = .02$. The avoidant PD was a significant predictor of less improvement in general as rated by the therapist, $\beta = -.11$, $t(308) = -1.97$, $p = .05$. We found no other significant influences of separate PDs on treatment outcome.

We also explored the influence of PD-related beliefs by means of forward linear regression analyses (we set probability of F entry at .05) and controlled for initial levels of symptoms, the influence of age, gender and duration of complaints. Dependent beliefs were negatively related to treatment outcome as measured by the Main Phobia-Fear and Avoidance subscales at all measurement moments (standardized beta coefficients ranged from -.17 to -.27, $p < .02$). Dependent beliefs were also negatively related to therapist-rated improvement: improvement of the main complaint, $\beta = -.33$, $t(365) = -5.03$, $p = < .01$; improvement in general, $\beta = -.17$, $t(363) = -2.50$, $p = .01$. Histrionic beliefs were positively related to treatment outcome as measured by the Main Phobia-Avoidance rating at FU1 and FU2, $\beta = .12$, $t(263) = 2.09$, $p = .04$; $\beta = .17$, $t(154) = 2.13$, $p = .04$, respectively. Borderline beliefs were a significant predictor of less improvement on the FQ total score at FU2, $\beta = -.16$, $t(138) = -2.03$, $p = .04$, and of less improvement in general as rated by the therapist, $\beta = -.18$, $t(363) = -2.90$, $p = < .01$. A striking finding is that obsessive-compulsive beliefs were related to more therapist-rated improvement on the main complaint, $\beta = .20$, $t(365) = 3.16$, $p = < .01$, and in general, $\beta = .29$, $t(365) = 3.16$, $p = < .01$.

Dropout rates

The results of the logistic regression (controlled for the influence of age, gender, and duration of complaints), indicate that dropout rates were not influenced by the presence of one or more PDs or PD-related beliefs in general.

Comparison of the results with standard regression analyses

To deal with the accumulation of missing data and to have comprehensive tests of the hypotheses, we used multilevel analyses. To check the validity of this approach, we

compared the results with those of standard multiple regression analyses using the same predictors and covariates. The results were comparable with the results of the multilevel analyses, although negative effects of PD-related factors were weaker and less consistent in the regression analyses, probably because of less power.

Discussion

Summary of Results

The present study found evidence for the widely held assumption that the presence of any PD and PD-related beliefs affect treatment outcome of anxiety disorders negatively. In particular, people with one or more PDs in the presence of high baseline symptoms reported higher symptom levels at outcome. However, these effects were not as strong as might be expected, on the basis of prevailing clinical thought in this area (the explained variance, approximately β^2, varied between 1% and 7%), and smaller than those found in outcome in depression (e.g., Kuyken et al., 2001; Shahar et al., 2003). Dropout rates were not influenced by the presence of one or more PDs or PD-related beliefs in general. These findings correspond to recent studies on CBT, which report no, or only limited, influence of PDs on treatment for anxiety disorders (Dreessen, Arntz, Luttels, & Sallaerts, 1994; Dreessen, Hoekstra, & Arntz, 1997; Steketee, Chambless, & Tran, 2001; Van Velzen, Emmelkamp, & Scholing, 1997). PDs seem less influential on CBT for anxiety than on CBT for depression, probably because of the different natures of anxiety and depression. To illustrate, it is possible that PDs interact with the anhedonic-interpersonal nature of depression, which renders PD more important in its treatment than in treatment for anxiety.

As to the hypothesized sets of specific beliefs, mistrust seems to be the strongest predictor of higher levels of self-reported symptoms at outcome. This finding is in line with the results of studies investigating the influence of paranoid beliefs or interpersonal distrust and sensitivity on treatment outcome in depression (Kuyken et al., 2001; Shahar et al., 2003). However, in the present study, mistrust was not significantly related to therapist-rated improvement. Of the four hypothesized sets of beliefs, only hopelessness tended to relate to improvement as rated by the therapist.

Exploratory analyses to examine the influence of specific PDs and related beliefs revealed that the presence of dependent beliefs was a consistent factor, influencing treatment outcome negatively with respect to the main complaint and therapist-rated improvement. These findings can possibly be explained by the assumed role of phobias in dependent personality disorder. Phobias tend to elicit care and protection from others and enable avoidance of responsibilities, which, in turn, provides secondary gain that is fully

consonant with a basic dependent orientation (Millon, 1996). The other effects, found in the exploratory analyses, have to be interpreted with caution. These effects were less robust and may be due to chance because of an increasing risk of Type I errors when a large number of predictors are entered in explorative analyses. Future research should test specific hypotheses on this issue.

Clinical Implications

Although evidence was found for the negative influence of PD-related features on treatment outcome of anxiety disorders, this influence is not so strong as is generally assumed by clinicians. The results demonstrate that treatment of anxiety disorders in patients with one or more concomitant PDs, is somewhat less successful than in patients without one or more PDs but is still appropriate. The presence of any PD and PD-related beliefs exerted some effects on treatment outcome but not an overwhelming one. Furthermore, we found no differences on general psychopathology between patients with and without one or more PDs after treatment. This indicates that, in general, there is no shift of symptoms after Axis I treatment in patients with one or more concomitant PDs, as is often suggested by clinicians treating patients with a PD.

A possible explanation is that the structure of CBT gives therapists and patients a concrete focus to work on. The focus prevents them from getting caught in the complexity of problems. However, given the small but significant effect of PD-related pathology, there is room for improvement. Patients with a PD may experience more benefit when treatment extends itself beyond the usual manuals for Axis I disorders, including CBT-elements for patients with comorbid PDs (Kuyken et al., 2001; see Beck et al., 2004). Given the negative influence of mistrust and the importance of treatment alliance in treatment outcome, adaptations of Axis I treatments may have to include techniques that improve the therapeutic relationship.

Another explanation of the discrepancy between clinical ideas and what research shows, is that therapists can suffer from feelings of being overwhelmed by the remaining other problems (besides the main complaint). In our treatment center, we notice that therapists often struggle with their own high standards concerning their treatment aims for patients with one or more concomitant PDs, whereas the involved patients are often satisfied with the achieved improvement. Treating the Axis I disorder can give patients hope and relief (on the level of main complaints and in general). Positive effects of Axis I treatment may, if indicated, even help to motivate patient and therapist to work on the level of personality.

Limitations

Some limitations of his study should be noted. First, in spite of the large sample, it is important to mention that the frequency of some specific PDs (especially the schizoid and schizotypal PD) was too low to investigate the influence of these specific PDs on treatment outcome. Second, only short-term follow-up data (≤ 6 months) were available. Third, we only used the FQ to measure the main complaint, and no specific anxiety disorder-related questionnaires were used. Therefore we were not able to exclude the possibility that PDs exert a stronger effect on other anxiety-related symptoms (like intrusions in posttraumatic stress disorder or compulsions in obsessive-compulsive disorder) than on phobia-related ones. Fourth, all participants received behavior therapy or CBT, which made a direct comparison between different kinds of therapies in interaction with PD pathology impossible. Fifth, we were not able to investigate the mechanism by which the PD-related factors found in this study influence treatment outcome. Further research is needed to unravel through which mechanisms PD-related factors affect treatment outcome.

Chapter 7

Treating Childhood Memories in Cognitive Therapy For Personality Disorders

Weertman, A. & Arntz, A. (submitted for publication).

Abstract

This study tested the hypothesis that treatment of childhood memories is an effective way to change personality disorder related schemas and psychopathology in cognitive therapy for personality disorders. To test this hypothesis, a crossover design was used to compare the effectiveness of methods focusing on the present and methods focusing on childhood memories. After the exploration period, the therapist focused either first on the present during 24 sessions and than for 24 sessions on childhood memories, or followed the reverse order. Twenty-one patients with one or more Axis II disorders were included. Participants were randomly assigned to order of focus. Results indicate that present and past techniques are equally effective. Total effects of the package were large and were maintained till one-year follow-up (*ds* 1.05-1.69). Experience of the therapist with CT for personality disorders was related to better outcome ($d = 0.73$).

Introduction

Next to psychodynamic therapy, cognitive therapy (CT) is one of the most frequently applied forms of psychotherapy in the treatment of personality disorders (PDs) (Leichsenring & Leibing, 2003). There is growing evidence that CT for PDs is effective (Perry, Banon, & Ianni, 1999; Verheul et al., 2003; Alden, Laposa, Taylor, & Ryder, 2002; Bateman & Fonagy, 2000; Brown, Newman, Charlesworth, Crits-Christoph, & Beck, 2004; Leichensring & Leibing, 2003; Nordahl & Nysaeter, in press; Svartberg, Stiles, & Seltzer, 2004). In the last decades, cognitive-behavioral therapists (Fleming & Pretzer, 1990; Freeman, 1990; Beck et al, 2004; Young, Klosko & Weishaar, 2003; Padesky, 1994) have developed a cognitive treatment approach to personality disorders that integrates behavioral treatment and cognitive techniques with experiential work and patient-therapist relationship oriented methods. However, as far as effectiveness has been studied, little is known about the effectiveness of specific interventions in CT for PDs.

Most common forms of CT of PDs are based on the cognitive model of Beck (Beck at al., 2004). According to this model, each PD is characterized by typical cognitive structures (schemas), which represent the core of the pathology. These schemas are active on a more continuous level compared to cognitive structures of Axis I disorders, direct broader functioning and are hypothesized to be resistant to change. Personality "traits" may be conceptualized as the overt expression of these underlying structures. These schemas are assumed to be developed from the interaction between innate dispositions (including the

individual's genetic predisposition) and environmental influences (exposure to undesirable influences from other people and specific traumatic events).

The assumed origin of Axis II schemas in childhood and their assumed resistance to change have important implications for treatment of PDs. Accordingly, clinicians often observe that traditional cognitive behavioral methods are not sufficient in treating PDs. There is therefore an increased interest in more specialized CT techniques for treatment of PDs (see among others Beck et al., 2004; Padesky, 1994; Young, 1994; Young, Klosko & Weishaar, 2003). These more specialized CT techniques have in common that they involve the integration of cognition and affect to a greater extent.

CT was initially oriented towards the present. However, methods used in CT Axis II treatment increasingly focus on the past. Imagery with rescripting and historical role plays are probably the most frequently used CT methods focusing on the past. These methods are primarily experiential and are inspired, or resemble methods known from experiential and psycho-analytic therapies. Although these developments have made these new forms of CT really integrative therapies, in the sense that they use methods and techniques from different orientations (Arntz & Weertman, 1999), these techniques are still theoretically framed in the cognitive model of PDs (preventing becoming eclectic in a non-theoretical sense).

One hypothesis is that exploring, emotionally processing and reinterpreting memories of early childhood experiences, is one of the most effective ways to change cognitive-affective structures, especially Axis II schemas. The rationale for this hypothesis can be derived from the more general concept of state-dependent learning. To "reality-test" the validity of childhood-originated schemas, the idea is that memories of experiences that contributed to their development should be activated and processed to change their meaning. Re-experiencing the episode facilitates the emergence of the dominant schemas and makes them more accessible for change (see Beck et al., 2004, page 89 and Arntz & Weertman, 1999).

Recent studies on emotion-focused experiential therapy (e.g. Greenbert & Malcolm, 2002; Pos, Greenberg, Golman & Korman, 2003; Watson, Gordon, Stermac, Kalogerakos, & Steckley, 2003) support the idea that emotional processing in therapy, with experiential techniques, is important to change.

The present study was designed to test the hypothesis that treatment of childhood memories by means of imagery with rescripting and historical role plays is an effective method for the treatment of PDs. An obvious comparison would be with methods that are less experiential and focus on the present.

The general treatment model we used in this study was based on the CT treatment for PDs according to Beck and coworkers (Beck et al., 1990; Beck, 1998), Young's schema-

focused therapy (Young, 1990; Young, Klosko & Weishaar, 2003) and on articles concerning specific CT-treatment methods in PDs (Arntz & Weertman, 1999; Padesky, 1994). To test the hypothesis, we separated exploration methods, methods focusing on the present and methods focusing on the past.

We used a crossover design in which our aim was to include ten matched pairs of patients with the same principal Axis II diagnosis. After 12 sessions pre-therapy exploration, the therapist focused either first on the present for a period of 24 sessions and than for 24 sessions on childhood memories, or followed the reverse order. Which of the matched pairs patients received which order was assigned randomly.

Within the scope of this study it is important to mention that we were primarily interested in the effect of treatment of childhood memories and not in the question whether specific childhood events contribute to the development of PDs. Results of studies into the influence of psychosocial adversities in childhood to the development of PDs are consistent with the idea that childhood environment plays a major role in the development of PDs (Carter, Joyce, Mulder & Luty, 2001; Johnson, Cohen, Brown, Smailes & Bernstein, 1999; Johnson, Smailes, Cohen, Brown & Bernstein, 2000; Paris, 1997; Rutter & Maughan, 1997). But it is still unclear which kinds of environmental factors we have to look for. There are many possible risk factors, such as family dysfunction, reinforcing and modeling of dysfunctional behaviors, early separation or loss, parental neglect, parental psychopathology, social disintegration, emotional/psychological abuse, physical abuse and childhood sexual abuse. Therefore childhood experiences of the participants, treated in this study, did not necessary have to be traumatic in a restricted sense. Because of the recent debate on false memories (see for a thorough discussion of the literature McNally, 2003) we want to clarify that when the term experience is used (in the sense of a childhood experience), not the historical facts are meant, but the memory of the event, i.e. the representation in memory of what was experienced (see also Arntz, & Weertman, 1999).

Next to the influence of treatment of childhood memories, we were interested in the influence of therapist's training and experience on treatment outcome. Training and experience in psychotherapy has been thought to be one of the central components of the well-known "common factors" in therapy. An updated meta-analysis of therapy outcome studies involving within-study comparisons of psychotherapists of different levels of training and experience, revealed that a variety of outcome sources are associated with medium effect-sizes favoring more trained therapists (Stein & Lambert, 1995). Therefore, we hypothesized that patients treated by more experienced and trained therapists will have better outcome than patients treated by less experienced and less trained therapists.

Lastly, we wanted to assess patients' and therapists' preference for a specific focus, and for a specific order (first focus on present, and than on past, or the reverse). As important stakeholders, patients' and therapists' opinions are important to take into consideration in developing new treatment protocols.

Method

Participants

Patients of the Community Mental Health Center at Maastricht who were indicated for a treatment focusing on personality pathology were asked to participate in this study when they met the following criteria: (1) at least one Axis II DSM-IV diagnosis (APA, 1994) other than Borderline PD, PD NAO, depressive PD or passive-aggressive PD; (2) requesting treatment for problems related to personality pathology; (3) willingness to enter a prolonged psychotherapeutic treatment; (4) no evidence of organic mental disorders accounting for the complaints, IQ < 80, psychotic disorders and insufficient knowledge of Dutch.

People with borderline PD were not included in this study because we expected that these patients needed a more prolonged treatment and the prescribed focus of therapy seamed not suitable to deal with self-damaging issues and other acute problems. Furthermore, it was expected that during a period of working on childhood experiences, people with borderline PD need more time to handle crises.

Participants were screened by means of the Structured Clinical Interview for DSM-IV Axis I and Axis II disorders (SCID-I: First, Spitzer & William, 1997; Dutch translation: Groenestijn, Akkerhuis, Kupka, Schneider, & Nolen, 1999; SCID-II: First, Spitzer, Gibbon, Williams, & Benjamin, 1997; Dutch translation: Weertman, Arntz & Kerkhofs, 2000). Finally twenty-one participants entered this study (6 men and 15 women). Originally we planned a matched pairs design with patients matched on first Axis II diagnosis. Because of problems with finding matched pairs and two drop-outs during the exploration period, it was impossible to recruit enough patients to have a complete matched pairs design. Main Axis II diagnoses were: avoidant $n = 5$; paranoid $n = 4$; dependent $n = 2$; obsessive-compulsive $n = 7$; histrionic $n = 2$; narcissistic $n = 1$. Mean number of PDs was 1.6.

Most of the patients had one or more anxiety disorder and/or a depressive disorder. For an overview of all Axis I disorders in this sample, see Table 1.

Table 1.

Axis I Diagnoses in the original sample (N = 21)

	n
Substance-Related Disorders	1
Mood Disorders	10
Anxiety Disorders	24
Somatoform Disorders	4
Sexual Disorders	2
Eating Disorders	1
Other Disorders (V-codes)	1

The mean number of Axis I disorders was 2.0. Mean age was 35.6 years (range 20-52). Mean level of education was intermediate vocational education. 61.9 % of the patients were living together with their spouse, partner or with relatives.

Treatment

Participants were treated individually in 1 hour, weekly sessions. Total treatment consisted of 1 pre-treatment session (during which therapist and patient made acquaintance and arrangements were made about sessions and measurements) and 60 weekly treatment sessions (described below). After these 61 sessions, 3 follow-up assessments were arranged, three months, six months and one year after termination of treatment. In addition to specific period-related homework, patients were asked to listen to the audiotape of the previous session as standard homework during total treatment.

Exploration phase (12 sessions)

The major aims of the exploration period were to build up a therapeutic relationship, to introduce the rationale, to identify schemas and formulate individual beliefs. Current problems as well as experiences that contributed to the development of the patient's schemas were listed to prepare the present and past period of treatment. Patients were encouraged to read the introduction chapters of "Reinventing your life" (Young & Klosko, 1994) during this phase. For research reasons, interventions aimed to change personality pathology, as described below in the present and past phase, were not allowed.

Present phase (24 sessions)

During the present phase, the major aim was to change maladaptive schemas and beliefs by techniques focusing on the present including continuum methods (Padesky, 1994), positive data, pie chart, Socratic questioning, schema-dialogues (Young, 1990), role plays in the present (Padesky, 1994) and the therapeutic relationship (emphatic confrontation,

giving direction, self-disclosure). Each session focused on schemas that were active in the present. Methods focusing on the past were not allowed. It was also not allowed to use historical tests of schemas (Padesky, 1994) in both present and past phase because this method focuses on both. Specific homework during the present phase consisted of identifying and challenging schema-related thoughts and core beliefs and formulating rational thoughts and new functional beliefs in their diaries. Behavioral experiments were also used.

Past phase (24 sessions)

During the past phase the major aim was to change the meaning of schematic representations that have roots in childhood by historical role-plays and imagery with rescripting (see Arntz & Weertman, 1999, for a more thorough description of these techniques and global rules to decide which to use). The use of present techniques to challenge schemas was not allowed. Acute problems were as much as possible related to historical roots of the activated schemas. In exceptional cases a crisis-session was inserted in which practical and supportive interventions took place but no schema-related therapeutic interventions of the present phase.

Therapists, Training and Treatment Adherence

Six therapists (five officially registered cognitive behavioral psychotherapists and one psychologist receiving training to become one) conducted the treatments. All therapists were trained in cognitive behavioral treatment of PDs by H. van Genderen, J. Young, and the second author. There were weekly meetings, during which cases were presented in detail and adherence to the protocol was checked. All sessions were audiotaped. Three random samples of tapes, from the exploration period, present-period and past-period, were independently rated by two mental health scientists (education is comparable to clinical psychology) who were trained in rating all three periods. Agreement on period ratings was excellent (Cohen's Kappa = 1.00, observed agreement = 100%). The Intraclass Correlation Coefficient (ICC: Fleiss, 1986) for rating the percentage of the time spend on changing schemas by using present techniques in the present phase was .93. The ICC for rating the percentage of the time spend on changing schemas by using past techniques in the past phase was .87.

Measures

Rosenberg Self-Esteem-Scale

The Rosenberg Self-Esteem-Scale (RSES; Rosenberg, 1965) was administered to measure changes in self-esteem because low self-esteem is associated with the PDs studied in the

present study (see Silverstone, 1991). The RSES consists of 15 items which have to be rated on five-point-scales (0 = completely true, 5 = completely untrue). The results of a study by Beekers (1982) indicated that the internal consistency of the Dutch version of the RSES is good (Cronbach alpha = .83, n= 201).

90-item Symptom Checklist

The 90-item Symptom Checklist (SCL-90; Derogatis, 1977); Dutch translation and adaptation: Arrindell & Ettema, 1981) is a widely used measure of overall distress. As is usual in PD research, we used the total score of the SCL-90 because the subscales assess specific symptom dimensions that are not specific to PDs (Perry & Sanlian, 2002). Items are scored on a 5-point scale. Psychometric properties of the Dutch version of the SCL-90 have shown to be excellent (Arrindell & Ettema, 1981).*Dutch Personality Questionnaire*

The Dutch Personality Questionnaire (DPQ; Luteijn, Starren & Dijk, 1985) is the most frequently used Dutch Personality Questionnaire. The DPQ consists of 132-items which have to be rated on a three-point scale (True/?/False). The DPQ measures the following personality aspects: neuroticism (21 items), social anxiety (15 items), rigidity (25 items), hostility (19 items), egoism (16 items), dominance (17 items) and self-esteem (19 items). The reliability and validation of the PDQ are satisfactory (Luteijn et al., 1985). Of the seven subscales of the PDQ the neuroticism, social anxiety and the self-esteem subscales were used in the analyses as they were deemed to be relevant for the PDs in the present study.

Schema Questionnaire

The Schema Questionnaire (SQ; Young & Brown, 1994; Dutch translation and adaptation: Sterk & Rijkeboer, 1997) is a 205-item self-report inventory designed to measure 16 early maladaptive schemas (identified by Young, 1994). Each item is rated on a 6-point scale ranging from "completely untrue of me" to "describes me perfectly". Results of studies testing the psychometric properties of the SQ (Lee, Taylor & Dunn, 1999; Schmidt, Joiner, Young & Telch, 1995; Waller, Meyer & Ohanian, 2001; Rijkeboer, Van den Bergh, & Van den Bout, 2005) revealed that the internal consistency of the subscales as well as the overall scale is adequate to high (alpha of the subscales of the Dutch version of the SQ ranged from .73 to .95) and that its primary factor structure is stable across clinical samples from different countries and for varies degrees of client psychopathology (Axis I or Axis II). Furthermore, the SQ was found to possess adequate test-retest reliability and convergent and discriminant validity with respect to measures of psychological distress, self-esteem, cognitive vulnerability for depression, and PD symptoms.

Personality Disorder Belief Questionnaire

The Personality Disorder Belief Questionnaire (PDBQ; Dreessen, 1996) is a Dutch self-report questionnaire which contains 12 subscales of 20 beliefs each hypothesized to be typical for the 12 DSM-IV PDs (APA, 1994). The beliefs are partly formulated on the basis of Beck et al. (1990) and partly hypothesized by the constructors based upon theoretical considerations and their clinical experience with patients with PDs. The beliefs have to be rated on a 100 mm Visual Analogue Scale (VAS) in terms of strength of belief. Item-ratings are expressed in mm, a higher score meaning stronger belief in the formulated statement (minimum score = 0, maximum score = 100). Arntz, Dreessen, Schouten and Weertman (2004) tested the psychometric qualities of the short version of the PDBQ (including the avoidant, obsessive compulsive, dependent, paranoid, histrionic and borderline subscales). Results indicated that internal consistencies as estimated by Cronbach alpha's coefficients of the above mentioned subscales are all in the good-excellent range (.83-.96) and the hypothesized factor structure in the PDBQ could be demonstrated.

Miskimins Self-Goal-Other Discrepancy Scale

The Miskimins Self-Goal-Other Discrepancy Scale (MSGO; Miskimins & Braucht, 1971; Miskimins & Baker, 1973) is a self-rating measure of self-concept that contains 15 trait items that consists of adjective pairs such as "happy-unhappy" and "good looking-ugly". Participants have to indicate on a 100 mm Visual Analogue Scale (VAS) where they currently place themselves on each dimension (self), where they would ideally like to be (goal), and how they think others see them (other). Two discrepancy scores were derived: the mean difference between self and goal, and the mean difference between self and (perceived) other's evaluations. Discrepancies between view of the self and goal are calculated by computing the differences between self and goal and self and other for each item and adding the differences for all items. The reliability and validity of the MSGO are well established (Miskimins & Braucht, 1971).

Idiosyncratic assumptions

Idiosyncratic assumptions (about ten assumptions per patient) were formulated during the exploration period and each was rated on a 100 mm Visual Analogue Scale (VAS) in terms of strength of belief. For the purpose of this study, the average belief strength (0-100) was used.

Preference Questionnaire

The Preference Questionnaire (PQ) consists of a therapist and a patient version and includes eight questions concerning which period (past or present period) was experienced as most effective and which treatment order was preferred in retrospect (not in general but for this particular patient or for his/her particular situation).

Procedure

Participants were asked to participate in this study during the intake procedure. When participants had signed informed consent they were allocated to the next available therapist. After termination of the exploration period, for each matched pair, the order of focus was assigned randomly. The questionnaires were administered at start and at the end of each treatment phase (exploration phase, present phase and past phase) and at 3, 6 and 12 months follow-up. Only the PQ was administered once, namely at one-year follow-up. Therapists filled in the PQ for every patient they treated. Patients and therapists were blind for each other's answers.

No additional treatment was given between post-test and first follow-up. When indicated, patients received further treatment after 3-months follow-up, either for remaining personality problems or for other reasons (e.g. marital problems).

Design

A crossover design was used. This within-patient design was chosen for ethical reasons (it gave every patient the opportunity to receive both treatment methods) and for we included patients with different PD diagnoses, varying in initial disease state and probably in their response to therapy. The exploration period served to control for the possible influence of attention.

Data Reduction and Statistical Analyses

We analyzed change scores between assessment 2 (at start of the first focus) and end of treatment by Principal Components Analysis to investigate if we could reduce the amount of outcome measures to enhance power. One component was extracted, explaining 74.35% of variance. All scales loaded > 0.76 on this factor. To enhance power, we decided to include one composite score by measurement moment into the final analyses. Composite scores were derived by averaging standardized scores of all dependent variables, with standardized scores computed over all measurements.

To measure the effect of total treatment (including the exploration phase) we calculated within condition effect sizes at post-test, 3-months follow-up, 6-months follow-up and 1-year follow-up. The within condition effect size represents how many standard

deviations the sample has changed on a given measure from pre-test. In recent reviews on the evidence of psychotherapy in PDs (i.e. Leichsenring & Leibing, 2003, Perry et al., 1999) effect sizes are interpreted as follows: 0.20 = small effect, 0.50 = medium, and 0.80 = large (Perry et al., 1999, page 1313; Leichsenring & Leibing, 2003, page 1229). To measure the effect of total treatment, data of drop-outs were included in the analyses. Data of one participant were missing at start of the exploration period. This participant was not included in the total treatment analyses but could be included in the remaining analyses.

To investigate the influence of treatment of childhood memories we first analyzed the data by means of General Linear Model Repeated Measures with treatment focus as within-subject factor and treatment order as between-subject factor. The effect of each focus (present and past) was calculated by subtracting the composite score at the end of each focus from the composite score at start of each focus. Drop-outs (n = 4) were not included in these analyses.

In a second analysis, we controlled for the influence of therapist's experience by adding this factor to the GLM-model as a between subject-factor. For that purpose we divided the therapists in a more and less experienced group (both n= 3). The experienced therapists had participated in a preceding project studying CT for PDs (Arntz, 1999). As a result of this, these therapists were more extensively trained and more experienced in CT for PDs compared to the less experienced therapists.

Results

Drop-outs

Two patients terminated treatment during the exploration period. A patient with a dependent PD was suicidal and wanted to be referred to a clinic. The other patient with a narcissistic PD was not motivated enough because of reported lack of suffering. Another two patients terminated treatment after finishing the present period (during the past period). One patient with an obsessive compulsive PD was not motivated to work in the past. The other patient with an avoidant PD still lived with her parents and working in the past initiated loyalty difficulties in the patient and resistance of her parents against therapy.

Treatment Adherence

The two independent raters identified the periods correctly in all the tapes they assessed. In exploration-period sessions, the time spent to change schemas by using past or present techniques was rated as zero. In present-period sessions, the time spent

explicitly working on changing schemas by using present-techniques was on average 63% and the time spent on past techniques was rated as zero. In the past-period sessions, the time spent on present-techniques was rated as zero and the time spent explicitly working changing schemas by using past-techniques was rated on average as 58%.

Effect of Total Treatment

To control for the possible influence of attention, we tested if participants changed between start and end of the exploration period. Participants did not differ in their composites scores at both measurement moments, $t(19) = -1.36$, $p = .19$, $d = -0.30$, meaning that there was no, or -if anything- a negative, effect of attention. Within condition effect sizes of total treatment (exploration phase included and independent of treatment order) were as follows: at post-test = 1.05, at 3-months follow-up = 1.69, at 6-months follow-up = 1.31 and at 1-year follow-up = 1.33.

Effects of Focus

A Focus (present focus/ past focus) x Order (present-past order/ past-present order) ANOVA revealed no main effect of focus, $F(1,15) = 0.74$, $p = .40$, indicating that there is no difference in improvement between present and past period. The within effect size of the present focus, independent of treatment order, was 0.70. The within effect size of the past focus, independent of treatment order, was 0.54. Furthermore, there was no main effect of treatment order, $F(1,15) = 0.08$, $p = .78$ or an interaction between focus and order, $F(1,15) = 0.40$, $p = .54$. Mean composite scores by treatment order at each measurement moment are presented in Figure 1.

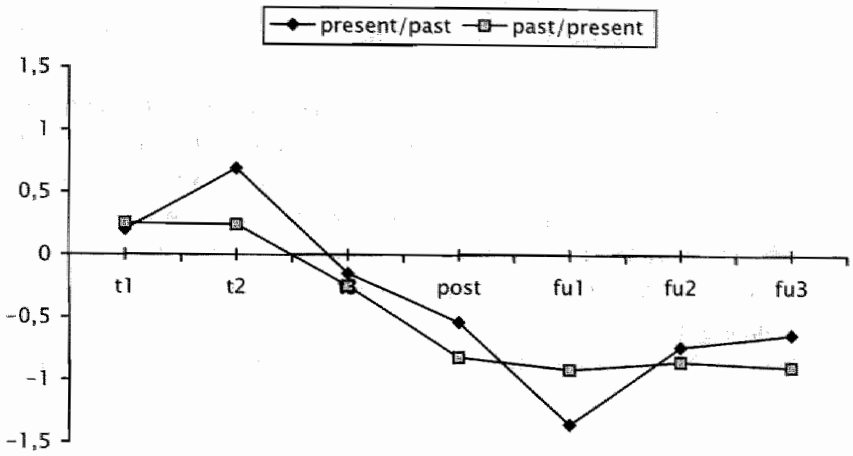


Figure 1.
Composite scores (ms) by treatment order at start of the exploration period (t1), at start of the first focus (t2), before start of the second focus (t3), at the end of therapy (post) at 3 (fu1), 6 (fu2) and 12 months (fu3) follow-up

Effects of therapist's experience

We tested the effect of therapist's experience by means of a Focus (present focus/ past focus) x Order (present-past order/ past-present order) x Therapist Experience (more experienced/ less experienced) ANOVA. A trend towards a main effect was found for Therapist Experience, $F(1, 13) = 4.50$, $p = .05$, $d = 0.51$. None of the other main or interaction effects approached significance. When focus and order were excluded from the analysis, the Therapist Experience effect became significant, $F(1, 16) = 8.97$, $p = < .01$, $d = 0.73$. Patients with a more experienced therapist improved more than patients with a less experienced therapist.

Preference of Patients and Therapists

The therapists evaluated the present focus as the most effective focus about as often as the past focus (present focus: 47% of treatments; past focus: 53 % of all cases). Patients judged the present focus as most effective more often than the past focus (present focus: 58 %, past: 25 %, both: 17%). With regard to treatment order, in most cases both therapist and patient preferred the past-present order (in 67 % of all cases).

Discussion

Summary of Results

The present study found evidence for the assumption that treatment of childhood memories in CT for PDs is, by and large, as effective as treatment focusing on the present. The effects of total treatment at post-test, 3-months, 6-months and 1-year follow-up were large (*ds* 1.05-1.69) and higher than is generally found in psychotherapy of PDs (see for example Perry et al., 1999; Leichsenring & Leibing, 2003). Given that absence of improvement during the exploration period, these effects could not be attributed to attention effects.

Furthermore, we found that experienced therapists are more effective in their treatment of PDs than less experienced therapists. This finding and the related effect size (0.73) are in line with the literature on the influence on therapist-related factors on treatment outcome (Stein & Lambert, 1995). Probably more experienced therapists have less difficulties in dealing with problems that arise in the therapeutic relationship (i.e. dealing with hostility, mistrust, clinging or commanding behavior, lack of treatment compliance etc.) compared to less experienced therapists. Likewise, the use of experiential methods to process painful childhood memories is quite complicated, follows unpredictable paths, and raises high emotions. These aspects may be difficult for less experienced therapists.

Results of the preference questionnaire indicate that both patients and therapists prefer to start with treatment of childhood memories. This order might be more acceptable for both patient and therapist because it attunes to assumed order of development of schemas as presented in the treatment rationale (schemas are developed in childhood and continue in adult life). Moreover, working in the present after treatment of childhood memories, helps to generalize, sink in, and apply in practice what one has learned in the past focus.

Clinical Implications

The results of this study indicate that both present techniques as well as treatment of childhood memories are effective in CT for PDs. This means that the "toolbox" of the therapist can be extended. In the case that both present and past techniques are used, it is recommended to start with treatment of childhood memories. This order seems to be more acceptable for both patient and therapist. Furthermore, the results of this study emphasize the importance of training and experience of therapists in CT for PDs.

Limitations

Several limitations of this study should be noted. First, because of the small sample size, the analyses comparing between subjects factors (the influence of treatment order and the influence of therapist experience) have to be interpreted with some caution. Second, because of the crossover design, a direct comparison between CT with and without treatment of childhood memories was not possible. This implicates that based on these results it is not possible to determine if a combination of present and past techniques is more effective than CT without treatment of childhood memories. Third, the sample was too small to investigate the influence of treatment of childhood memories on CT for separate PDs. Further research is needed to investigate the possible surplus value of treatment of childhood memories in CT for separate PDs on short-term and long-term.

Chapter 8

General Discussion

Introduction

The studies presented in this thesis aimed to test basic assumptions and treatment implications of the cognitive model of personality disorders. Chapter 1 served as a theoretical background for the empirical studies presented in this thesis. The main results of the various studies will be summarized below, limitations will be discussed and conclusions will be drawn. Finally future research directions and clinical implications of this thesis will be summarized.

Short-term test-retest interrater reliability of the SCID-II

The first study of this thesis was included to assess the interrater-reliability of the SCID-II in our sample of interviewers and patients. Adequate interrater reliability constitutes one of the necessary conditions for research in personality disorders. Because assessment of PDs was not the main topic of this thesis, this study will only briefly be discussed. The results of the test-retest interrater reliability study indicate that, as far as we could test, the SCID-II is a suitable instrument for assessing personality pathology in terms of categorical diagnoses and dimensional trait- and sumscores. The number of PDs for which we could calculate Kappa and ICC coefficients was restricted. However, as far as results were reported, they are meaningful because the methodological characteristics of this study facilitate the generalizability of the results (the test-retest approach and the involvement of three settings and 10 raters). Furthermore the mean interval between tests ranged from one to six weeks. This reduces the risk of an artificial increase in reliability by memory-effects. More large-scale test-retest research is needed to test the interrater reliability of more specific PD-categories of the DSM-IV version of the SCID-II.

The cognitive formulation of personality disorders and information processing features

The second and third study of this thesis (chapter 3 and chapter 4) were designed to validate the cognitive conceptualisation of OCPD by studying schema-related information processing. Study 2 (chapter 3) investigated the interpretation of ambiguous schema-related events in the context of OCPD. Ten short descriptions of mildly negative events were administered to patients with OCPD, borderline patients, avoidant and dependent patients, axis I patients and healthy controls. After each description participants filled out open and forced-choice format questions. In contrast to our hypothesis, we found no evidence for a disorder-specific interpretation bias in OCPD patients. By contrast, we

found disorder-specific interpretations of OCPD-relevant events for APD, DEPD and BPD. These results support the validity of the cognitive profiles of APD, DEPD and BPD and the notion that interpretation bias in PDs do not only occur in disorder-related situations but in a wide range of situations.

Although we found no disorder-specific interpretation bias in OCPD, in study 2 we found other disorder-specific information processing features in OCPD. The responses on the open-ended questions of the second study revealed that OCPD patients are characterized by a disorder-specific style of processing ambiguous information, namely, a ruminative and compulsive style of information processing. This finding is in line with several cognitive theories and treatment models of OCPD (see Beck et al., 2004; Freeman, Pretzer, Fleming, & Simon, 2004; Pretzer & Hampl, 1994).

Study 3 employed the Simon paradigm to test the hypothesis that OCPD is characterized by an implicit, i.e. unconscious interpretation style of the self and of others that is disorder specific. The results of study 3 support the idea that people with OCPD traits are characterized by automatic disorder-specific representations of themselves and others. These self-representations include characteristics like being responsible, conscientious, neat, disciplined and hardworking. Typical other-representations refer to opposite characteristics like being unthinking, irresponsible, careless, undisciplined and lazy. Taken the results of the study using the Interpretation of OCPD-Threatening Events Questionnaire (IOTEQ) and the Simon study together it seems that OCPD patients do not differ from patients with Axis I disorders or from normal controls in their explicit, i.e., conscious interpretations, but more on the level of automatic associations and cognitive style. These results are in line with a study of Arntz, Dreessen, Schouten and Weertman (2003), testing the disorder specificity of specific sets of beliefs in PDs. They only found weak associations between OCPD beliefs (as assessed with the Personality Disorder Belief Questionnaire) and OCPD as assessed with the SCID-II. The absence of disorder-specific interpretations can also be attributed to methodological characteristics of the study mentioned in chapter 2 (the absence of real healthy control interpretations and the absence of probability and cost ratings). Nevertheless, the possibility exists that OCPD-patients are not so much aware of their disorder-specific interpretations compared to patients with APD, DEPD and BPD. This problem of lack of self-understanding in OCPD has been frequently reported in the literature (see Freeman et al., 2004; Pretzer & Hampl, 1994). Individuals with OCPD are often strongly committed to their rigid, thorough, perfectionist approach to life. They usually are not aware of their strategies and views and do not recognize the relation between their problems (e.g., fatigue, anxiety, depression or interpersonal problems) and their obsessive-compulsive personality features. Finally, it can be suggested that OCPD is a coping style to handle other underlying beliefs or

schemas, for example early maladaptive schemas as defined by Young (1994). The cognitive style of OCPD resemble the concept of the schema-mode of the overcompensator, as described by Young et al. (2003) and Arntz, Klokman & Sieswerda (2005), which may serve to compensate for the pain associated with their schemas. However, taken into account the results of the Simon study, this would mean that the underlying beliefs and schemas in OCPD are mainly represented on an implicit level.
In study 4 we used eight TAT-cards to measure interpretation bias in people with DEPD-traits and paranoid PD-traits. Although the TAT pictures presented in this study were to a large extent ambiguous, we found disorder-specific interpretations. These results are in line with the results of study 2, sustaining the pervasiveness of disorder-specific interpretations. Furthermore, the findings in study 4 also support the hypothesis that beliefs are an essential factor in information processing, mediating (in a statistical sense) the relation between PD traits and interpretation bias.

Cognitive therapy and Personality Disorders

Most patients suffering from a PD enter cognitive therapy for Axis I complaints like an anxiety or mood disorder and are not particularly interested in treatment for their Axis II disorder (Beck et al., 2004). In the past it was common sense that there was no point to treat people with PDs for their Axis I disorder. Treatment was assumed to be ineffective and to result in shift of symptoms in these patients. However, in the past decades several studies investigating the influence of PDs on treatment for anxiety and mood disorders showed inconsistent results. Some studies found no effect, some a negative effect and some a positive effect (see reviews by Dreessen & Arntz, 1998; Mulder, 2002; Reich, 2003). Several studies suffered from methodological problems that complicates comparison of the results (see for a discussion of these factors and "best-evidence criteria" Dreessen & Arntz, 1998). Furthermore, an important finding is that overall, the best-designed studies reported the least effect of personality pathology in anxiety and depression outcome (Dreessen & Arntz, 1998; Mulder, 2002).
In our study we aimed to tackle methodological problems often found in previously published studies by: (a) including a large sample to deal with power problems, (b) using a well-known semi-structured interview to facilitate comparison with other studies, (c) evaluating one well-described treatment modality, (d) controlling for initial levels of symptoms (because people with a personality disorder diagnosis often have higher levels of symptoms at start of therapy, evaluating absolute end state functioning, does not teaches us anything about relative improvement in treatment), and (f) assessing personality pathology double-blind (in some studies, personality pathology was assessed

after treatment). Therefore, the rater and the patients were not blinded to the effects of treatment, which might have yielded confounded results).

Results of our study show that the presence of one or more PDs was a significant predictor of higher symptom levels at outcome with respect to avoidance of the main complaint and an almost significant predictor of less improvement on fear of the main complaint, fear in general and on therapist-rated improvement of the main complaint. Especially people with PD(s) in the presence of high baseline symptoms reported higher symptom levels at outcome with respect to fear and avoidance of the main complaint. People with PD-related beliefs reported higher symptom levels at outcome on all self-report measures and on therapist-rated improvement of the main complaint. However, these effects were not as strong as might be expected, based on prevailing clinical thought in this area, and smaller than those found in outcome in depression (e.g. Kuyken, Kurzer, DeRubeis, Beck, & Brown, 2001; Shahar, Blatt, Zuroff, & Pilkonis, 2003). Remarkably, scores on the SCL-90 were not influenced by the presence of any PD. This finding is in contrast with the idea that treatment of Axis I disorders results in shift of symptoms. Also drop-out rates were not influenced by the presence of one or more PDs or PD-related beliefs in general. These findings correspond to recent studies on CBT which report no or just limited influence of PDs on treatment for anxiety disorders (Dreessen, Arntz, Luttels, & Sallaerts, 1994; Dreessen, Hoekstra, & Arntz, 1997; Stetekee, Chambless, & Tran, 2001; Van Velzen, Emmelkamp, & Scholing, 1997). However, prudence is called for generalizing these relative optimistic results to infrequently diagnosed PDs in patients with anxiety disorders (e.g. schizoid, schizotypical, antisocial and narcissistic PD). Results from our study and other empirical studies may be restricted to the more frequently diagnosed PDs in this population, especially Cluster C PDs (Dreessen, 1998).

Next to the influence of DSM-IV PDs, we tested assumptions derived from cognitive models of PDs concerning the influence of PD related beliefs on treatment outcome in anxiety disorders (Beck et al., 2004; Young, 1994). As to the hypothesized sets of specific beliefs, mistrust seems to be the strongest predictor of higher levels of self-reported symptoms at outcome. This finding is in line with the results of studies investigating the influence of paranoid beliefs or interpersonal distrust and sensitivity on treatment outcome in depression (Kuyken et al., 2001; Shahar et al., 2003). Furthermore, the negative influence of beliefs reflecting mistrust is understandable remembering that simply participating in therapy requires the client to engage in a number of activities that he or she experiences as being quite dangerous. These include self-disclosure, acknowledging weakness, and trusting another person, among others (Freeman et al., 2004). We also found evidence for a negative influence of dependent beliefs on treatment

outcome. The dependent beliefs we assessed, refer to the assumption that competence will lead to abandonment. This logically impedes steps toward becoming more capable and less symptomatic. In the last section of this chapter implications of these findings for clinical practice will be discussed.

Positive outcome of treatment of an Axis I disorder can motivate patients with concomitant PD to enter treatment focused on their PD problems. Furthermore, at the start of treatment some patients just ask for treatment of their personality problems. Results of studies investigating the results of CBT for PDs are encouraging (Leichsenring & Leibing, 2003; Perry, Banon, & Ianni, 1999). Although these results are promising, they also show that there is room for improvement.

Clinicians often have clear ideas about which interventions are the most effective in treatment of PDs. In the last study of this thesis we tested the assumption that exploring, emotionally processing, and reinterpreting memories of early childhood experiences is an effective way to change PD related schemas and psychopathology in cognitive therapy for PDs (chapter 7). We compared the effectiveness of treatment of childhood memories compared to methods focusing on the present. We found that treatment of childhood memories in CBT for PDs is as effective as treatment focusing on the present. This means that the "toolbox" of the therapist can be extended. The effects of total treatment at post-test, 3-months, 6-months and 1-year follow-up were large (*ds* 1.05-1.69). Unfortunately, because of the cross-over design we used, a direct comparison between CBT with and without treatment of childhood memories was not possible. Because of the small sample size we were not able to investigate the influence of the use of present and past techniques for separate PDs.

Although it seems that specialized CBT in general is effective for PDs, it is quite conceivable that differences in characteristics between the DSM-IV PDs or variations within one DSM-IV PD category determines which specific techniques are appropriate to use. For example, Alden and Capreol (1993) found that variability in focal interpersonal problems in patients with APD moderated treatment response. APD patients who reported problems with interpersonal dependence benefited from a CBT-regimen that addressed assertiveness and the development of intimate relationships. In contrast, APD patients whose primary interpersonal difficulties were avoidance and emotional distance, benefited from a CBT-regimen based on in vivo exposure to social situations (Alden & Capreol, 1993). More research is needed to unravel which CBT techniques are effective for which PD or PD-subtype.

In accordance with the literature on the influence of therapist's experience and treatment outcome (Stein & Lambert, 1995), we found that more experienced therapists had better outcome than less experienced therapists. This is not surprising, given the highly

specialized character of the techniques we used. Furthermore, independent of the technical difficulties, work with PDs typically requires significant effort, planning, and stress management on the part of the therapist (Beck et al., 2004). Training and experience in working with PDs is therefore really necessary.

Limitations of the presented studies and suggestions for future research

There is growing evidence for the validity of the cognitive model of personality disorders. From the literature and based on the results of the studies presented in this thesis, we can conclude that the cognitive model is not in its infancy anymore. In general, former research findings have supported the basic assumptions of the cognitive model (e.g. Arntz, Dreessen, Schouten, & Weertman, 2004; Beck et al., 2001; Dreessen, Arntz, Hendriks, Keune, Van den Hout, 1999; Jacquin & Telch, 1998; Renneberg, 2001; Veen, 2000; Gallagher, South, & Oltmanns, 2003; Sieswerda, Arntz, & Wolfis, 2005) and several studies have shown that therapy based on cognitive models is effective for PDs (e.g., Giesen-Bloo et al., 2005; Alden, Laposa, Taylor, & Ryder, 2002; Beck et al., 2004; Leichsenring & Leibing, 2003; Linehan, Armstrong, Suarez, Allmon, & Heard, 1991; Perry et al., 1999; Svartberg, Stiles, & Seltzer, 2004; Verheul et al., 2003).

However, results of this thesis also suggest that more refined research is needed, both in information processing (implicit and explicit level) and interventions based on these findings for specific PDs. The sparse attempts to test cognitive conceptualizations of PDs have mainly focused on BPD (e.g. Lobbestael, Arntz, & Sieswerda, 2005; Renneberg, 2001; Sieswerda et al., in press; Veen, 2000), resulting in highly specialized CBT-treatments for this disorder (e.g. Arntz, 1994; Beck et al., 2004; Layden, Newman, Freeman, & Byers Morse, 1993; Young, 1994). Research concerning the development of more elaborated cognitive profiles for specific PDs is needed, comparable to research of cognitive models for the separate Axis I anxiety disorders and mood disorders. This will lead to more effective and specialized treatments for the specific PDs.

A problematic aspect of research in PDs is that research paradigms that can be successfully applied in Axis I disorders are not always appropriate to investigate information processing and treatment implications for PDs. The concept of PDs is more complicated than most Axis I disorders and covers broad functioning, including interpersonal relationships, which are more difficult to assess in experimental tasks, than for instance, phobic stimuli. The information processing studies presented in this thesis were therefore not only aimed to test the cognitive model of PDs but also implicated the development of valid paradigms to investigate information processing in PDs. The results

of the information processing studies in this thesis are promising first steps in the development of these paradigms. However, further research is needed to further refine these paradigms and test their stability as well as their predictive validity within treatment outcome studies.

With respect to the influence of PD-related factors on treatment outcome in anxiety disorders, we were not able to investigate the mechanism by which the PD-related factors influence treatment outcome. To better address problems in Axis I therapy, further research is needed to unravel through which mechanisms PD-related factors affect treatment outcome (including therapeutic relationship issues).

Finally, the results of study 7 reveal that it is needed to investigate the influence of general therapeutic factors (e.g. experience and training of the therapist) in CBT for PDs. We found no difference between using different techniques in CBT for PDs. Results of recent studies (for example, Alden and Capreol, 1993), suggest that it might be useful to investigate the effectiveness of specific interventions for separate PDs of for specific problems within various PDs. In other words, next to research on general therapeutic factors, more research is needed to unravel which CBT techniques are effective for which PD or PD-subtype.

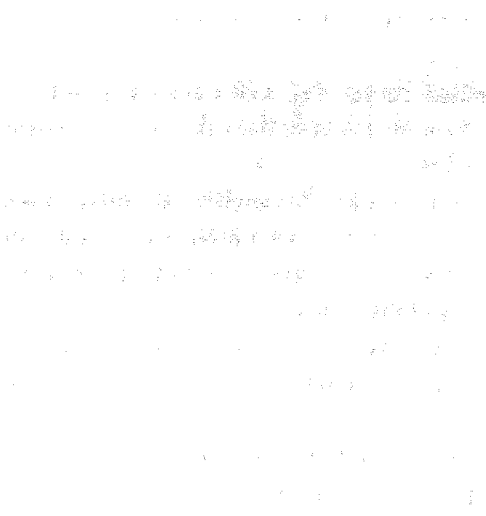
Implications for clinical practice

The clinical implications of the results of the studies presented in this thesis can be summarized as follows:

1. The SCID-II is a reliable instrument for the assessment of PDs in clinical practice.
2. The results of this thesis support the importance of specific beliefs in APD, DEPD, BPD and paranoid PD. It is important to work on decreasing the influence of maladaptive interpretations and increasing the availability or salience of alternative interpretations in CBT for APD, DEPD, BPD and paranoid PD.
3. In OCPD the role of specific beliefs is unclear. In CBT for OCPD patients it is important to work to change information processing strategies and coping styles. Although the OCPD patients may not be aware of specific beliefs, there is evidence that on an implicit level such beliefs play a role. Therefore in CBT for OCPD patients it is further recommended to first help patients to become aware of their beliefs and after that change these beliefs.
4. The results of the open-ended questions in study 3 indicate that patients with BPD, APD and DEPD hardly use healthy problem strategies ("solution tendency "and "tackle the problem" in BPD and "flexibility" and "acceptance" in APD and DEPD). Therefore,

next to work on cognitions, it is recommended to teach adequate problem strategies in CT for BPD, APD and DEPD.

5. CBT treatment of patients with a concomitant PD for their Axis I anxiety disorder is somewhat less successful in decreasing main phobia symptoms than CBT treatment of patients without PDs, but is still appropriate.
6. PD-patients may experience more benefit in CBT for anxiety disorders when treatment extends itself beyond the usual manuals for Axis I disorders to deal with PD-related beliefs, especially including techniques that address beliefs affecting the therapeutic relationship and the self-efficacy of the patient.
7. Both techniques focusing on the present as well as treatment of childhood memories are effective in CBT for PDs. This means that the "toolbox" of the therapist can be extended.
8. More experienced and trained therapists are more effective in their treatment of PDs than novices. Education and gaining experience for therapists in CBT for PDs are important.



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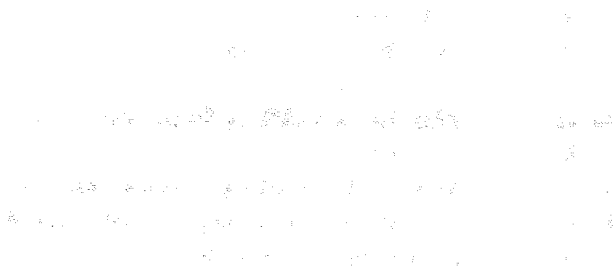

Samenvatting

Cognitieve gedragstherapie voor persoonlijkheidsstoornissen wint steeds meer aan populariteit. Opvallend is dat er relatief weinig onderzoek gedaan is naar zowel de theoretische aannames van het cognitief gedragstherapeutisch model voor persoonlijkheidsstoornissen (Beck et al., 2004) als naar de behandelimplicaties. De resultaten uit eerder onderzoek naar dit model van persoonlijkheidsstoornissen zijn echter veelbelovend. De studies die beschreven zijn in dit proefschrift bouwen voort op dit eerdere werk.

In dit proefschrift wordt de term persoonlijkheidsstoornis gehanteerd zoals beschreven in de Diagnostic and Statistical Manual of Mental Disorders (DSM) uitgegeven door de American Psychiatric Association.

Een basisvoorwaarde voor goed onderzoek naar persoonlijkheidsstoornissen is een goede interbeoordelaarsbetrouwbaarheid van het diagnostisch instrument dat wordt gebruikt. In de eerste studie hebben we de test-hertest betrouwbaarheid van het Gestructureerd Klinisch Interview voor vaststelling van DSM-IV persoonlijkheidsstoornissen (SCID-II; First, Spitzer, Gibbon, Williams, & Benjamin, 1997) onderzocht. De SCID-II is één van de meest gebruikte semi-gestructureerde interviews voor het vaststellen van DSM-IV persoonlijkheidsstoornissen en is in dit proefschrift gebruikt om DSM-IV persoonlijkheidsstoornissen te diagnosticeren. De resultaten van de interbeoordelaars betrouwbaarheidsstudie laten zien dat de SCID-II een geschikt instrument is voor het vaststellen van DSM-IV persoonlijkheidsstoornissen.

De studies beschreven in hoofdstuk 3 t/m 5 zijn opgezet om informatieverwerking bij persoonlijkheidsstoornissen te meten. Het cognitieve model van Beck (2004) gaat er vanuit dat iedere persoonlijkheidsstoornis gekenmerkt wordt door specifieke onaangepaste schema's. Deze schema's zijn kennisstructuren die de informatieverwerking sturen en bevatten informatie over het zelfbeeld, het beeld van anderen en van de wereld. Deze informatie is voor een groot deel impliciet, d.w.z. niet rechtstreeks onder woorden te brengen en alleen maar indirect te reconstrueren middels het analyseren van automatische gedachten, gevoelens en gedrag. De reconstructie van de kennis die opgeslagen ligt in schema's kan worden verwoord middels assumpties. Dit zijn fundamentele aannames over het zelf, anderen en de wereld. Verondersteld wordt dat iedere persoonlijkheidsstoornis gekenmerkt wordt door specifieke assumpties of schema's. Bijvoorbeeld mensen met een ontwijkende persoonlijkheidsstoornis worden gekenmerkt door assumpties als: ik ben een mislukkeling, saai en oninteressant, en: anderen zijn niet werkelijk in mij geïnteresseerd, kijken op mij neer en doen dingen veel beter dan ik.

De studies die beschreven staan in hoofstuk 3 t/m 5 zijn opgezet om te onderzoeken of persoonlijkheidsstoornissen inderdaad gekenmerkt worden door stoornisspecifieke schema's en informatieverwerking. In studie 2 hebben we informatieverwerking gemeten door middel van een verhaaltjestaak. Patiënten met een obsessief compulsieve persoonlijkheidsstoornis (OCPS) werden vergeleken met patiënten met een ontwijkende of afhankelijke persoonlijkheidsstoornis, borderline persoonlijkheidsstoornis, een As I stoornis en gezonde controle proefpersonen. Patiënten en controle personen kregen 10 ambigue verhaaltjes te lezen. Onderzocht is of mensen deze verhalen op een stoornisspecifieke manier interpreteren. In studie 3 hebben we met behulp van een impliciete taak gekeken in hoeverre we stoornisspecifieke informatieverwerking ook op een minder bewust niveau kunnen meten bij studenten met OCPS trekken. In de verhaaltjestaakstudie vonden we dat patiënten met een ontwijkende of afhankelijke persoonlijkheidsstoornis en patiënten met een borderline persoonlijkheidsstoornis de verhaaltjes interpreteerden volgens hun stoornisspecifieke schema's. Opvallend is dat we dit niet vonden bij de patiënten met OCPS. We vonden dat patiënten met OCPS niet zozeer gekenmerkt worden door specifieke ideeën over zichzelf of anderen op een bewust niveau, maar wel dat ze zich van de andere groepen onderscheiden door de manier waarop zij informatie verwerken. Hun stijl van interpreteren kenmerkt zich door dwangmatigheid en piekeren. In studie 3 vonden we op een impliciet niveau wel verschillen tussen studenten met en zonder OCPS trekken in zelfbeeld en beeld van anderen conform onze hypothesen. Wanneer we de resultaten van studie 2 en 3 samen nemen, is het aannemelijk dat mensen met OCPS of OCPS-trekken niet zozeer van andere mensen verschillen wat betreft hun bewuste interpretaties van situaties maar veel meer op het niveau van automatische (minder bewuste) associaties en hun cognitieve stijl.
In studie 4 hebben we platen van de Thematic Apperception Test (TAT; Muray, 1943) gebruikt om interpretatie van ambigue situaties te meten voor afhankelijke en paranoïde persoonlijkheidstrekken. De resultaten van deze studie bevestigen de cognitieve conceptualisering van afhankelijke en paranoïde trekken. De resultaten onderschrijven tevens dat met name de assumpties een mediërende factor spelen in stoornisspecifieke informatieverwerking.
Hoofdstuk 6 en 7 richten zich op behandeling van mensen met een persoonlijkheidsstoornis. In studie 5 (hoofdstuk 6) is onderzocht in hoeverre de aanwezigheid van een persoonlijkheidsstoornis of aan persoonlijkheidsstoornissen gerelateerde assumpties een effect hebben op de effectiviteit van de behandeling van angststoornissen. Uit deze studie blijkt dat mensen met een persoonlijkheidsstoornis (en dan met name patiënten met een persoonlijkheidsstoornis in combinatie met een hoog klachtenniveau bij aanvang van behandeling) minder verbetering laten zien als het gaat

om hun belangrijkste angstklacht vergeleken met mensen zonder een persoonlijkheidsstoornis. Deze verschillen zijn echter niet erg groot en er is ook geen sprake van symptoomverschuiving bij de mensen met een persoonlijkheidsstoornis. Wat betreft algemene psychische klachten verbeteren deze mensen gemiddeld net zoveel als mensen zonder een persoonlijkheidsstoornis. Als we kijken naar de invloed van specifieke assumpties, blijken assumpties die te maken hebben met wantrouwen en met afhankelijkheid, een voorspeller te zijn voor minder verbetering van angstklachten. In deze studie werd geen effect gevonden van de aanwezigheid van een persoonlijkheidsstoornis op drop-out.

De laatste studie (hoofstuk 7) richt zich op cognitieve gedragstherapie (CGT) die specifiek gericht is op de behandeling van de persoonlijkheidsstoornis. Onderzocht is in hoeverre het bewerken van jeugdervaringen een bespoedigend effect heeft op het verloop van CGT voor persoonlijkheidsstoornissen. Verschillende CGT onderzoekers en therapeuten nemen aan dat het bewerken van jeugdervaringen vergeleken met het bewerken van problemen in het hier en nu, een effectieve methode is. De redenering daarachter is dat de schema's die kenmerkend zijn voor persoonlijkheidsstoornissen in de vroege jeugd zijn ontstaan. Hierdoor is deze kennis niet zozeer op een zuiver cognitief niveau opgedaan maar veel meer op een ervaringsniveau. De meer ervaringsgerichte technieken die bij het bewerken van jeugdervaringen centraal staan, sluiten meer aan bij het niveau van kennisrepresentatie zoals dat bij veel persoonlijkheidsstoornissen het geval is. Om te onderzoeken in hoeverre het bewerken van jeugdervaringen effectief is, kregen patiënten met een persoonlijkheidsstoornis na een exploratiefase, een fase van 24 sessies waarin met meer traditionele hedentechnieken werd gewerkt, afgewisseld met een fase van 24 sessies waarin enkel gewerkt werd met het bewerken van jeugdervaringen. De volgorde van deze twee fasen werd door het toeval bepaald. Eerst hebben we gekeken naar het effect van de totale behandeling. Patiënten verbeterden aanzienlijk tijdens de behandeling en deze verbetering bleef bestaan op langere termijn (gemeten 1 jaar na afloop van de behandeling). Wat betreft de hoofdvraagstelling van deze studie blijkt dat hedentechnieken en het bewerken van jeugdervaringen even effectief zijn. We vonden wel duidelijke verschillen in effectiviteit tussen ervaren en minder ervaren therapeuten. De ervaren therapeuten die meer getraind waren in het CGT model voor persoonlijkheidsstoornissen en ook meer ervaring daarmee hadden opgedaan, boekten betere resultaten met hun patiënten dan de minder ervaren therapeuten.

Tenslotte bevat hoofdstuk 8 een samenvatting en discussie van de studies zoals beschreven in dit proefschrift. Daarnaast worden er suggesties gegeven voor vervolgonderzoek en de implicaties van de bevindingen voor de klinische praktijk worden kort uiteengezet. Deze klinische implicaties worden hieronder nog eens kort samengevat:

1. De SCID-II is een betrouwbaar instrument voor de vaststelling van persoonlijkheidsstoornissen in de klinische praktijk.
2. Het is onduidelijk wat de rol is van specifieke assumpties bij OCPS. In CGT voor OCPS is het belangrijk om te werken aan het veranderen van informatieverwerkings-strategieën en copingstijlen. Omdat er wel aanwijzingen zijn dat er op een impliciet niveau wel sprake is van specifieke assumpties bij OCPS, wordt aanbevolen tijdens de therapie aandacht te besteden aan het meer bewust maken van deze assumpties om deze vervolgens te kunnen veranderen.
3. De resultaten van dit proefschrift onderschrijven het idee dat de ontwijkende, afhankelijke, borderline en paranoïde persoonlijkheidsstoornis gekenmerkt worden door specifieke assumpties. Bij deze stoornissen is het belangrijk in CGT te werken aan het verminderen van de invloed van maladaptieve interpretaties en het vergroten van de beschikbaarheid of belang van alternatieve interpretaties.
4. Uit studie 3 blijkt dat zowel voor patiënten met een borderline persoonlijkheidsstoornis als voor patiënten met een ontwijkende en/of een afhankelijke persoonlijkheidsstoornis geldt dat ze weinig gebruik maken van gezonde copingstrategieën. Naast het werken met cognities is het daarom van belang om deze mensen adequate probleemoplossende vaardigheden te leren.
5. CGT behandeling van een As I angststoornis, is aangewezen voor patiënten met een comorbide persoonlijkheidsstoornis.
6. CGT voor een angststoornis bij mensen met een persoonlijkheidsstoornis, zal tot betere resultaten leiden wanneer er technieken worden gebruikt die niet alleen op de As I klacht zijn gericht maar technieken die zich tevens richten op bijvoorbeeld het verbeteren van de therapeutische relatie en het zelfvertrouwen van de patiënt.
7. Zowel het werken gericht op het heden als het bewerken van jeugdervaringen zijn effectief in CGT voor persoonlijkheidsstoornissen. Dit betekent dat de gereedschapskist van de therapeut kan worden uitgebreid.
8. Scholing en het opdoen van ervaring in CGT voor persoonlijkheidsstoornissen zijn van groot belang voor de therapeut om tot een goed behandelresultaat te komen.

Appendix

English (and Dutch) stimulus words used during the target stage of the three tasks as a function of word type

OCPD self-view	OCPD other-view
serious (serieus)	unthinking (onbezonnen)
perfectionist (perfectionistisch)	lawless (losbandig)
cautious (bedachtzaam)	thoughtless (ondoordacht)
principled (principieel)	hasty (overhaast)
consecientious (gewetensvol)	indifferent (onverschillig)
responsible (verantwoordelijk)	irresponsible (onverantwoordelijk)
disciplined (gedisciplineerd)	undisciplined (ongedisciplineerd)
neat (netjes)	lazy (lui)
hard-working	careless (slordig)
low self-esteem	**high self-esteem**
inferior (minderwaardig)	good (goed)
stupid (dom)	clever (slim)
unstable (labiel)	stable (stabiel)
failed (mislukt)	beloved (geliefd)
worthless (waardeloos)	worthy (waardevol)
dumb (stom)	nice (leuk)
wrong (verkeerd)	fine (prima)

Dankwoord

Er zijn veel mensen die direct of indirect een bijdrage hebben geleverd aan dit proefschrift die ik graag wil bedanken.
Ten eerste alle patiënten en studenten die als proefpersonen meegewerkt hebben aan de verschillende studies. Zonder hun openhartigheid en vertrouwen was dit proefschrift er nooit gekomen.

Arnoud Arntz, mijn begeleider en promotor. Ik besef nu pas hoeveel geluk ik heb gehad met jou als promotor. Ik heb zelden iemand getroffen die zo oprecht wil weten hoe iets in elkaar steekt, en bereid is alle mogelijke uitkomsten te accepteren. Jouw oprechte nieuwsgierigheid, kennis en wetenschappelijke drive werken aanstekelijk en hebben mijn interne motivatie gevoed waar ik op moeilijke momenten op kon varen. Daarnaast was je ook een voorbeeld als het gaat om persoonlijke ontwikkeling buiten het werk. En dan bedoel ik met name de muziek.

Hannie van Genderen, teamleider van het toenmalige "Dwarsverband Academisering" (DAC), je hebt mij altijd gesteund in mijn opleiding als onderzoeker en therapeut en met raad bijgestaan als het ging om de hobbels die je bij zo'n combi tegenkomt. Als ik op een "onderzoeksdag" de Riagg inliep, stuurde je me resoluut terug naar de universiteit. En onder jouw leiding was het onderzoeksklimaat in ons team op de Riagg optimaal.

Laura Dreessen, jij was degene die mij attendeerde op de vacature voor dit promotietraject en mijn stimulerend voorbeeld als het ging om de combi van onderzoek en praktijk.

Ook mijn andere oud-collega's van het DAC en later het zorgprogramma angststoornissen en persoonlijkheidsstoornissen wil ik bedanken voor hun inzet voor de verschillende onderzoeken, jullie stimulans en steun. Ik heb jullie niet altijd met de leukste klussen opgezadeld (24 sessies alleen maar imaginaties en rollenspelen mogen doen, of eindeloos SCID-II's afnemen). Ik vind het fantastisch hoe jullie hebben meegedacht en meegewerkt. In het bijzonder wil ik als "Riagg-maatjes" bedanken, Hermien Elgersma en Ina Leeuw. Ina, ik ben heel blij dat je straks als paranimf naast mij zult staan.

Mijn oud-collega's van het Departement Differentiële en Experimentele Psychopathologie. Ik vond het heel stimulerend om op een vakgroep te werken met zoveel goede en

gedreven onderzoekers en zoveel mogelijkheden om je te kunnen ontplooien. Erik Schouten wil ik speciaal bedanken voor zijn statistische ondersteuning en engelengeduld. Je bent niet voor niks co-auteur van twee artikels. Bert Hoekstra wil ik graag bedanken voor zijn ondersteuning bij de experimenten en de gezellige schaatsavonden. Mijn ex-kamer genoten Titia Weiland en Ellen Sebregts wil ik vooral bedanken voor de kameraadschap. Ellen, ik ben heel blij dat jij er als paranimf wilt zijn.
Josephine Giesen, fijn dat we zoveel konden delen, zowel inhoudelijk over onderzoek als even spuien over dagelijks lief en leed. Marie-Anne, jij ook bedankt voor je interesse en de kopjes thee (eerst op de uni en later thuis). Mijn overige aio-collega's van het eerste uur, Sabine Jansen, Sabine Kroeze en Anja van de Hout, bedankt voor die goede oude tijd. Peter de Jong, bedankt voor je aanstekelijke enthousiasme al tijdens mijn jaarwerkstuk en je bereidheid je kennis te delen.
Sjoerd Salet, Malu van Kronenburg en Inge Coenen, bedankt voor al jullie tijd die jullie gestoken hebben in jullie afstudeerstages in het kader van dit proefschrift.

Mijn nieuwe collega's op de Viersprong. Bedankt voor jullie betrokkenheid, het delen van de voorpret van de promotie en alles wat ik alweer in die korte tijd heb geleerd op de Viersprong. Ik ben blij dat ik bij jullie werk.

Mijn vrienden en familie. In al die jaren ging mijn proefschrift steeds meer tijd vragen, ook naast het werk waardoor ik er nu ontzettend naar uit kijk weer meer tijd te hebben voor jullie. In het bijzonder wil ik mijn ouders noemen die mij geleerd hebben kritisch na te denken, een onontbeerlijke eigenschap voor een onderzoeker en daarnaast mij de mogelijkheid hebben gegeven om mij op mijn eigen manier te ontplooien. Ook mijn schoonouders wil ik bedanken voor hun onvoorwaardelijke steun en vertrouwen.

Tenslotte mijn man en kinderen. Rein, we hebben ooit samen de beslissing genomen aan dit avontuur te beginnen. Op de moeilijke momenten, als ik me schuldig voelde omdat ik je weer eens met de afwas en de strijk achterliet om aan mijn proefschrift te werken, heb je me er steeds aan herinnerd dat we er samen voor hebben gekozen. Dit maakte dat het nooit een eenzame exercitie is geworden. En wat heb je er een mooi boek van gemaakt! Dank voor alles. Toke en Hanna, door jullie is het steeds heel duidelijk wat er echt toe doet in het leven. Wat geniet ik van jullie. En dat wordt alleen maar meer.

Curriculum Vitae

Anoek Weertman werd op 3 September 1973 in Heemskerk geboren. In 1991 behaalde zij haar VWO diploma aan het Bonhoeffer-college in Castricum. In datzelfde jaar ging zij Gezondheidswetenschappen studeren aan de Universiteit Maastricht. Na het afronden van haar studie in 1996 met als afstudeerrichting Geestelijke Gezondheidkunde, werd zij aangesteld als psychotherapeut en onderzoeker in opleiding bij de Riagg Maastricht. Voor haar onderzoekswerkzaamheden werd zij gedetacheerd naar het Departement Medische, Klinische en Experimentele Psychologie van de Universiteit Maastricht. Deze aanstelling mondde uit in het schrijven van dit proefschrift. In dezelfde periode volgde zij de opleiding tot psychotherapeut, de VGT-opleiding tot gedragstherapeut en de opleiding tot onderzoeker bij de onderzoeksschool Experimenteal Psychopathology (EPP). In 2003 won zij de artikelprijs EPP met het artikel "The influence of beliefs and personality disorders on treatment outcome of anxiety disorders and hypochondriasis". Zij is inmiddels geregistreerd GZ-psycholoog en psychotherapeut en werkt sinds mei 2004 als psychotherapeut bij Psychotherapeutisch Centrum de Viersprong in Halsteren.

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